

The Influence Factors of Knowledge Usage in Online Informal Community of Practice

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Abstract—The key problem of informal community of practice is -there is a lot of shared knowledge, but the use of shared knowledge seems limited. If informal communities of practice can increase the amount of knowledge usage, it will become more valuable. This research aims to identify factors that encourage members of informal community of practice to use shared knowledge. A single case of Blueplanet community of practice in pantip.com is used for this research. The primary data collection is message analysis. The preliminary result, factors that encourage members of informal community of practice to use shared knowledge are personal factors (communication capabilities, and social capability), trust factors (personal trust, and group trust), and content factors (value and relevancy, and picture presentation). To enhancing the understanding of this phenomenal, this study propose new theoretical point of view that integrate factors that can encourage members of informal community of practice to use the shared knowledge.

Index Terms—Knowledge usage factors, online community of practice, knowledge management.

I. INTRODUCTION

The advancement of information technology especially Internet technologies arises whereas online community increases rapidly. Examples of online community technological platforms are social network systems like Facebook and Twitter, or discussion board systems. In the past, people used online community for many individual purposes such as social interaction and communication purposes. Nowadays, individuals' purposes also cover for the need for acquiring, sharing, and using knowledge from online communities [1]. Therefore, online communities have transformed themselves into informal communities of practice where they refer to a persistent, sustained social network of individuals who share and develop an overlapping knowledge base, set of beliefs, values, history and experiences focused on a common practice [2]. The key problem of online informal community of practice is -there is a lot of shared knowledge, but the use of shared knowledge seems limited [3]. If online informal communities of practice can increase the amount of knowledge usage, it will become more valuable [4].

Based on the above statement of problem, the research questions are "What are the factors that encourage members of online informal community of practice to use shared knowledge?" Answers to this question can help communities'

administrators deal with how to increase the amount of shared knowledge usage.

II. REVIEW OF RELATED LITERATURE

A. Knowledge Usage

Knowledge usage has been used interchangeably with the terms knowledge utilization and knowledge application. Although, they are different terms, their definitions tend to explain the same thing. For the sake of understanding, this study will use the term knowledge usage. According to Peterson (2009), the work seeks to measure knowledge pickup, processing, and applying. Knowledge pickup means the process of retrieving or receiving knowledge whether from a data bank, a library shelf, a consultation session, or other means. Knowledge usage refers to practical use, perceptual use, adaptive use, selective use, premature use, rejected use (i.e., deliberate nonuse), discontinued use, and misuse [5]. Knowledge usage is also meant to adaptive use, discontinued use, disuse, and misuse of knowledge, [6].

From various definitions, they can imply that knowledge usage has three level of use. First, utilizing knowledge that mean the state of being useful, profitable, beneficial [7]. Second, applying knowledge means the usage of a particular knowledge and adapts it for individual purposes [8]. Lastly, using knowledge is the action of using knowledge that is available to individual [9]. Using knowledge level is the basic level of knowledge usage. It only pays attention to individual usage of knowledge for their purposes and the interest is not focused on how they use, or benefit of knowledge.

B. Form of Community of Practice

Community of Practice is a group that comprises of two or more persons who interact with each other regarding a common goal. Members of a group interact with each other based on the norms and culture of the group . Group work often involves some type of negotiation in which the members attempt to reach an agreement relative to a particular view or make a decision regarding an idea [10].

Community of practice can be separated into two forms of social relation, which are formal community of practice and informal community of practice [11]. Formal community of practice refers to communities which are treated as a knowledge management tool in organizations. On the other hand, informal community is a network of individuals who share a domain of interest, which prominently occurs through online platforms.

C. Online Informal Community of Practice

Since Internet began, individuals and organizations have

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been attracted by the concept of connecting with others using online community via social media and WebBoard. Online communities can be stated in terms of online informal communities. Online informal communities have a variety of technical availabilities, support a very diverse range of interests, beliefs, activities, and practices [12] Online informal communities are internet based systems and services that allow members to: 1) create profiles within community, 2) articulate a list of other users with whom they share a connection, and 3) communicate with other members in community. They help members to have a social connection with other members. They have been beneficial for both individual and organization purposes. Examples of organization sectors using informal community of practice include private companies, non-profits, political organizations, government, and education [13].

III. METHODOLOGY

This paper focuses on an understanding of what happens in a real-life context. It is an inquiry or exploration of a phenomenon that may have no singular answer and the answers may not be easily predicted. The complexity of the social phenomenon such as the social structure, processes and value of knowledge usage in online informal community of practice require a qualitative approach in an effort.

Case study research is a qualitative research method and describes a unique way of collecting, organizing and analyzing data. The purpose of a case study is to collect comprehensive, systematic and in-depth information on the case of interest.

The intention of this study is to provide insight into the emerging idea or concept of knowledge usage in online informal community of practice that has been a limited number of researches and proposed theories. This paper utilizes the qualitative theoretical framework of case study. A case study approach choose in an effort to provide insight into the concept of knowledge usage in informal community of practice and to learn about, analyze and document experiences of members in a community of practice.

A. Message Analysis

Pantip.com is the most famous website in Thailand that provides web board service as online informal communities of practice. There are many communities of practice cover all topics that members interested in such as computer and technology, beauty, entertainment, health, travel, or sport.

A single case of Blueplanet online informal community of practice in pantip.com is used for this research. The participants in this study are the members of Blueplanet. The primary data collection is message analysis. Message analysis should capture messages based on main categories as below.

- 1) Type of topics and comments, it should distinguish between information topics and knowledge topics based on definition of knowledge that is personalized information that derived from feedback, opinion, experience, and learning on particular products and service or related.
- 2) Type of knowledge management process related activities including acquire, store, share, or use

knowledge. An example of sharing knowledge is asking a question that they want to know such as "please help me to verify a travel plan to Hong Kong." If there is a member's response, "I think you should go to Nong Ping village in the morning, because you will not spend a lot of time for queue to cable car. And you should purchase ticket via cable car's website because you can go through fast track queue," this can represent sharing knowledge activity. An example for a storing knowledge related message can be shown, as "I will save this topic for my future plan." Lastly, if message is written as "I followed your plan already, it is really work", this could be determined as an example of knowledge usage.

- 3) Message analysis also observes such members' behaviors as when they post topic and comment. Analysis includes counting the number of these behaviors. This criterion will help distinguishing active and inactive members. An inactive member is the one who only looks for knowledge and does not contribute any knowledge to the community. An active member is the one who does not only answer questions, but also posts responses which could be pieces of knowledge that are beneficial to others.

B. Case Study

Blueplanet is an informal community of practice in Pantip.com. According to Henri and Pudenko (2003), Blueplanet can capture all important characteristics [6]. First, Blueplanet is an open community for people to join. It facilitates members to freely communicate with others on the common interest. Moreover, they voluntarily share and use knowledge from this community. Second, Blueplanet provides many features to support learning in community such as instant message and topic management. These features facilitate members to form a social process through the interaction among members. Finally, members in Blueplanet help each other to solve problems. In addition, this community arranges face-to-face meetings for members to participate.

To answer the research questions, researcher aims to observe the knowledge usage behavior in online informal community of practice through three categories of members, including active members, moderate members and inactive members. Every member can change his or her behavior from one role to another. Therefore, participants will be selected to cover these three categories of knowledge usage behavior.

Blueplanet is selected in this case. This community of practice is about travelling. It is suitable for this case because it is in top three of all communities of practice in terms of number of users, topics and comments. Moreover, it is better than others because the members in Blueplanet exchange not only information but also knowledge. Moreover, it has covered five types of topics, which are question topic, conversation topic, review topic, news topic, and poll topic.

Blueplanet can be divided into twenty-six sub communities of practice that Pantip provides tags for them. It assists the members to read, share, and interact on topics of their interest. The statistics of the topics in all sub communities of practice were collected in four months, between March and June 2016.

From the observation, communities can be classified into three types based on participation of members, which are

active, moderate, and inactive community of practice. Group of online informal communities of practice can be selected as below;

- 1) Active community of practice consist of nine sub communities of practice; which are Backpack, Traveler record, VISA, Airline, International Travel, Sea Travel, Thailand Travel, Map, and Hotel and Resort.
- 2) Moderate community of practice includes nine sub communities of practice; which are Online Travel Agency, Driving, Omnibus, Train, Airport, Waterfall Travel, Mountain Travel, Temple Travel, and Ecotourism.
- 3) Inactive community of practice has eight sub communities of practice; which are Scuba Diving, Snorkeling, Thailand Travel exhibition, Bird watching, Fishing, Trekking, Floating Travel, and Passenger Ship.

To complete this study, active community of practice is selected. There are nine sub communities of practice but three sub communities have high number of topics and more outstanding than the others; which are Traveler record, Airline, and International Travel. In addition, they were also stable in member participation times during the period of study. International Travel has the highest number of topics, so it is selected for this study. With the same criteria, omnibus is selected from moderate community of practice and trekking is selected from inactive community of practice.

IV. RESULT

This section discusses the motivations that affect knowledge usage behavior in informal community of practice. Knowledge usage influence factors can derive from functions of message.

A. Personal Factors

Knowledge usage can be seen from the personal perspective. It is about what and how members use knowledge in community. This study found that it could divide into two categories, including communication capability and social process

1) Communication Capability

This study focused on pantip.com that is the online informal community practice. It uses web board as a tool to participate in the community. Most communication is through messages. Therefore, communication capability in this study is not face-to-face participation that depends on behavior and style of knowledge contributor, but it includes writing skill and writing style. This factor can reflect from the words and meaning such as good writing, easy to understand, and clear explanation. From function of message that analyze in three types of community of practice, the topic that has a lot of telling function as a long telling story, the signal for knowledge usage can be found in thankful and admiring. There are 1,054 messages in admiring, they can be found 254 messages that has signal to knowledge usage. And there is 72 messages for communication capability.

For example:

“This is a good writing! It is very easy to understand. I will follow your schedule”

“You explained very clearly. I will use this plan too.”

“When I read your post, I feel like I have a private guide. I have fun and can get a lot of knowledge”

2) Social Process

Social process is the ways that individuals and groups interact, adjust, readjust, and establish relationships and pattern of behavior through their social interactions. Threads that have the various conversation such as greeting, chatting, and sharing their knowledge, they will lead to knowledge usage. Social process is observed from messages that member discussing and talking. Most of knowledge usage signal can be found in the topic that has a lot of message, especially the positive message as admiring, thankful, joking, and greeting. The more members talk, the more signal for knowledge usage.

For example:

“Hello, all Pantip members. I have a plan to Myanmar. How should I prepare? If anybody has an experience in Myanmar, please give me an advice. Thank you very much.

Let me keep this knowledge. I have a plan to Myanmar too.

For me, the wet tissue is very important because you have to take off your shoes at every temple. You must remove them from the temple gate. Moreover, you should prepare Thailand twenty-bath bank for tip.

Thank you for your advice. I will follow your advice.”

In active community of practice, this study found that the communication in this community of practice consisted of greeting, talking, and appreciating pictures. This communication leads the members to use the shared knowledge in community of practice. This kind of communication can also be found in moderate community of practice, but the level of communication is less than in the active community of practice. However, it is different from inactive community of practice. In this community of practice, the members do not communicate with others. Moreover, this study found that it does not lead to knowledge usage. Therefore, it can conclude that social process affected knowledge usage.

B. Trust Factors

“Trust is the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party” [14]. If the members in communities believe in trustors who share their knowledge, they tend to use this knowledge. This study found two types of trust, which is personal trust and group trust.

1) Personal Trust

Personal trust is the willingness of a person to increase his or her vulnerability to the actions of another person. In community of practice, it has many members that interested in the same threads. It also has the experts within the community. They are always share their knowledge and answer the questions from the other members. When the experts share their knowledge or answer questions, the member tend to follow their advice because they believe in them. Most of message that signal to personal trust can be found in greeting function of message. In 1,361 greeting message, it can be found only 111 messages have signal to knowledge usage. In addition, there are 30 messages that tend to personal trust.

For example:

“Wow, this is Dr. Yoong’s advice. I will follow you.”

“This is the advice from MS. Pladip. It confirms that this advice about Japan is true.”

“Thank you very much for your advice, Khun Naru. I am very excited that the expert gives it to me.”

2) Group Trust

Group Trust is the willingness of one person to increase his or her vulnerability to the actions of a group of people. When the members acquire their knowledge in community, they may do not know who the expert is. They can observe from the conversation among members, and then they believe in someone who the other members believe. Group trust can be found the same as personal trust. It can found in four greeting messages function of message.

For example:

“Most members follow you, so I will try as you advise.”

“Oh, you are the well-known member. I will follow your advice.”

“In Pantip, everybody says you are the expert about Japan. Thank you for your review. I get many things from you. I will use this thread for my Japan trip planning.”

C. Content Factors

Content in this online informal community of practice is the textual or visual content that is encountered as part of the user experience in community. It includes text, images, sounds, videos, and animations. This study found content factor could be separate into two factors, including value and relevancy.

1) Value and Relevancy

Value and relevancy content is the content that has benefit for members using this knowledge, and increases the likelihood of accomplishing the members’ goal. The threads and comments that reflect this factor should be useful for members’ goal. Value and relevancy can be found in 28 admiring and 21 thankful messages. It shows a sign to knowledge usage.

For example:

“Great! It is a perfect information and knowledge. I will follow this review”

“This is very valuable. I will copy your plan.”

“I am going to Hong Kong. This thread is perfect and useful. I will plan my trip like yours”

2) Picture Presentation

Picture presentation provides a simple explanation. It can help the members visualize more. In addition, it can make threads and comments more interesting. The more the members read, the more the members share and use knowledge. Value and relevancy can be found in 29 admiring and 24 thankful messages.

For example:

“Nice picture! Japan is very interesting. Next year I will follow your plan”

“I like your pictures. They make me plan to Hong Kong like you.”

“I will copy your trip to Hong Kong because of your beautiful pictures.”

V. DISCUSSION

This study aims to identify factors that encourage members

of informal community of practice to use shared knowledge. Knowledge usage factors are derived from the objective. Message analysis is used for investigate the phenomenon in community of practice. The result exposes four knowledge usage factors.

First, personal factor is composed of two sub factors, which are communication capability and social process. This factor arise members share and use knowledge in community of practice base on that knowledge are discussed and conversed among members. This aligns with W. E. Stein (2005) [15]. Moreover, this factor confirms with Carlile (2004) and W. E. Stein (2005) members in community of practice tend to use knowledge that they are understand from their communication [15], [16].

Second, trust factor is found. Collaboration among members is the importance activity, especially trustworthiness of each member because trust is the important role in community of practice. When members trust other, they please to share and use knowledge in community of practice [17], [18]. This thesis found two type of trust, personal trust and group trust. According to personal trust is trustworthiness in person who member believes he/she is the expert. Member in community of practice tend to share and use knowledge from the others who they trust. In addition, if they do not know who the expert is, they will observe in community of practice who is the most of members trust and communicate with; they tend to trust knowledge from that member. This is the group trust [4].

Lastly, member in community of practice choose knowledge that rely on their demand. They defined objective and theme of knowledge they want in mind. They might focus on content that knowledge is directly related to their demand, and they will use knowledge that benefit to them [19]. This is align with content factor in this study.

Practitioners can get benefits from this research. This study enhances understanding on which are important factors that encourages members of informal community of practice to use shared knowledge. It can help website owners to deal with how to encourage members to use shared knowledge in community. Thus, if website owners can enhance numbers of knowledge usage in community of practice, content in the informal community of practice will be more valuable for members.

VI. CONCLUSION

This paper aims to find the result from the research question “what are the factors that encourage member of online informal community of practice to use shared knowledge?” This study was done using qualitative methodology. It was conducted to explore the possible factors that encourage members in community of practice in using shared knowledge. Blue planet community of practice in pantip.com was selected to be used as a case study. Data collection was done in March and June 2016 from three types of communities of practice (active, moderate, and inactive) with message analysis. Three factors were found. Personal factor is the first factor that can be found in this research. Knowledge usage can be seen from the personal perspective.

It is about what and how members use knowledge in community. This study found that it could divide into two categories, including communication capability and social process. Second, trust factor, If the members in communities believe in trustors who share their knowledge, they tend to use this knowledge. This study found two types of trust, which is personal trust and group trust. Lastly, content factor is a factor considering the content of the posts which includes text, image, sounds, video, and animation. Member judge how to use the shared knowledge from how the content is presented. It can be found in value and relevancy, and picture presentation.

This study will examine only online informal community of practice that mainly uses knowledge related to individual purposes. The implication of the result of this study on other types of communities of practice might be limited or should be determined with caution. Although the study involves the usage of knowledge by community members, only usage knowledge encouragement aspect is explored. The issues related to intellectual property and knowledge quality are not investigated.

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