

Understanding User Motivations for Asking and Answering a Question on Brainly, Online Social Learning Network

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Abstract

As an emergence of social question-answering (Q&A) services has spurred the growth of social information seeking through question-answering interactions in order to share knowledge and information for users' need in their learning processes, the current study focuses on conceptualizing and gaining a holistic view of what motivates students to visit social Q&A services and engage in social interactions for sharing and seeking knowledge. The findings show that an immediate help, learning, verification are the top motivations for asking a question, while altruism, learning, and self-enjoyment are the top motivations for answering a question on Brainly, an online social learning Q&A service.

Keywords: Information seeking; Motivation; Social network; Social Q&A; Online learning

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1 Introduction

Searching for information online for learning has become prevalent, and a variety of online information technologies and services facilitate users' learning processes by providing relevant and helpful information to satisfy their need in learning. In recent years, an emergence of social question-answering (Q&A) services has spurred the growth of social information seeking through question-answering interactions in order to share knowledge and information for users' need in their learning processes. Especially, social Q&A services incorporate various benefits of peer-learning in education such as higher achievement and greater productivity in learning outcomes, cost-effective of learning strategies, as well as good social interaction skills (Levine et al., 1987; Kamps et al., 1994).

As the impact of new information and communication technologies (ICT) has become more significant in education and learning processes, the current study conducted a survey study with 635 Brainly users to investigate their motivational factors of asking and answering a question in virtual environments in order to gain a holistic viewpoint of what motivates students to use social Q&A services and engage in social interactions for sharing and seeking knowledge.

2 Background

2.1 Social Q&A services

Social Q&A services, unlike face-to-face Q&A services (e.g., reference service in libraries, etc.), are online information sources where people identify their information need, formulate the need in natural language, and interact with one another to receive answers to satisfy their information need in virtual environments. Social Q&A services allow people to identify their information need, formulate the need in natural language, and interact with one another to receive answers to satisfy their information need. Harper et al. (2008) argue that online Q&A services are "purposefully designed to allow people to ask and respond to questions on a broad range of topics" (p.866). Additionally, social Q&A services allow crowds or members of a community to answer questions, traditionally undertaken by reference librarians. These online Q&A services therefore allow people to have human-to-human interactions for seeking and sharing information (e.g., Yahoo! Answers, etc.), while having the convenience of doing it virtually (Shah et al., 2009).

2.2 Brainly: Online Social Learning Network for Students

Brainly (<http://brainly.com>) is an online social learning network for students. The site attempts to bring middle school and high school students together to make learning outside the classroom highly engaging,

effective and rewarding. Users connect to their peers online to help strengthen their skills within 16 school subjects (e.g., mathematics, chemistry, biology, physics, etc.). Similar to other social Q&A services, Brainly users voluntarily interact with other users via asking and answering a question, as well as social conversations (e.g., comment, etc.), in order to learn more about school subjects.

2.3 Motivation

Motivation is referred to as “inner states or process of the organism – needs, drives, etc. – which prompt and guide behavior” (Maehr, 1974, p.887) that drive people to act in a certain way to fulfill their needs, as well as some external factors that influence an individual’s behavior (e.g., Deci & Ryan, 1985; Herzberg, 1966).

In a field of Library and Information Science (LIS), the concept of motivation has been also paid attention since an information need may be “a cause of information seeking” (Case, 2002, p.80) that drive people to participate in a variety of interactions in information seeking. In this sense, previous research works have focused on various settings to investigate users’ information needs, e.g., a digital reference service (Pomerantz & Luo, 2006). As social Q&A services have been emerged in the recent year, several studies have also investigated what motivates users to participate in question-answering interactions in different interests and domains of social Q&Q services. For instance, Oh (2012) proposes 10 different motivational factors to understand why answerers are willing to share their information and experiences for health-related issues on Yahoo! Answers, while Zhang (2010) and Choi et al. (2013) focus on why social Q&A users ask a question in online environments.

3 Method

3.1 Data Collection

An online survey was created to identify motivations for asking and answering a question on Brainly. Survey questionnaires consist of closed questions based on a 5-Likert scale (1-Strongly disagree to 5-Strongly agree) to investigate how Brainly users are motivated, as well as open-ended questions to gain a better understanding of how users have been either encouraged and/or hampered in question-answering interactions to seek and share information for homework problems on Brainly.

A survey was administered electronically and designed to recruit survey respondents. The survey link was distributed through e-mail used when they signed up. The initial emails were sent out from July 22nd to 27th, 2015, and additional follow-up email reminders were also distributed in the week following the first online survey distribution. In addition, active Brainly users were targeted, who have either asked and/or answered at least 10 questions on Brainly in the past three months, to participate in the study.

3.2 Motivational Variables for Asking and Answering a Question

First, in order to identify motivations for asking a question on Brainly, the study adopted the motivational variables used in the previous study (Choi & Shah, in press), which initially identified from uses and gratifications theory focusing on understanding what motivates individuals to consume a certain medium to satisfy their needs. Table 1 presents a series of motivational variables used in the study to understand what motivates Brainly users to ask a question.

Survey question	Motivation for asking
I want to get an immediate help and information for my homework	Cognitive needs
I look for learning to gain knowledge in my favorite subjects	Cognitive needs
I need friends who care about my homework on Brainly	Affective needs
I try to ask a question on Brainly to verify the information that I have	Personal integrative needs
I want to meet with (new) friends on Brainly	Social integrative needs
I have fun asking a question on Brainly	Tension free needs

Table 1. Motivational factors asking a question

Second, we adopted 8 motivational factors for answering a question from the previous study (Oh, 2012) where the author attempted to investigate why health answerers are willing to share their knowledge, information, and experience with others on Yahoo! Answers; each motivational factor was identified by previous research works, which focused on user interactions in online communities and support groups listed in Table 2.

Survey question	Motivation for answering
I can receive points and raise my rank on Brainly	Personal gain
I can enhance my reputation on Brainly	Reputation
It is fun to answer a question	Self-enjoyment
I like helping other students with my answer	Altruism
It encourages me to be connected to others on Brainly	Social engagement
I also learn through answering questions	Learning
I have had similar homework problems before	Empathy
Others answered my questions before, so I also want to return the favor by answering questions	Reciprocity

Table 2. Motivational factors for answering a question

4 Findings and Discussion

635 Brainly users participated in the current study investigating user motivations for asking and answering a question. Eight major markets were focused in order to recruit Brainly users to the study - Argentina, Brazil, Ecuador, Columbia, Indonesia, Mexico, Peru, and Russia.

Motivation for asking a question	Mean	S.D
I want to get an immediate help and information for my homework problems	3.95	1.13
I look for learning to gain knowledge in my favorite subjects	3.94	1.11
I need friends who care about my homework on Brainly	3.03	1.30
I try to ask a question on Brainly to verify the information that I have	3.75	1.13
I want to meet with (new) friends on Brainly	3.12	1.31
I have fun asking a question on Brainly	3.24	1.29

Table 3. Motivations for asking a questions on Brainly

In terms of motivations for asking a question on Brainly, it was found that an immediate help, *I want to get an immediate help and information for my homework*, is the most prominent motivation for asking a question (Mean=3.95, S.D.=1.13), followed by learning, *I look for learning to gain knowledge in my favorite subjects* (Mean=3.94, S.D.=1.11) and verification, *I try to ask a question on Brainly to verify the information that I have* (Mean=3.75, S.D.=1.13). The survey results show that affective needs, *I need friends who care about my homework on Brainly*, is the least prominent motivational factor for asking a question on Brainly (Mean=3.03, S.D.=1.30).

It may be prevalent that an immediate help for learning is the most prominent motivation for asking a question since users utilize Brainly to obtain factual information supporting their learning processes in a timely manner to solve their homework problems. However, it is an interesting finding that users participated in question-answering interactions in an effort to verify existing information on Brainly. This may signify that students have more than one information source to satisfy their needs in learning, thus future studies may focus on investigating how different information sources would be selected when searching information, as well as understanding users' contextual situations of how they choose information sources. Table 3 describes the details of the motivational factors for asking a question on the social learning Q&A site among the survey participants.

In regard to the motivational factors for answering a question on Brainly, it was found that altruism, *I like helping other students with my answer*, is the most prominent motivation for answering a question (Mean=4.63, S.D.=0.68), followed by learning (Mean=4.31, S.D.=0.93) and self-enjoyment (Mean=4.18, S.D.=1.00). However, reputation, *I can enhance my reputation on Brainly*, was found as the least motivation for answering a question on Brainly (Mean=3.69, S.D.=1.21). The findings highlight that willingness of helping others seems to be the most influential factor for answers to share their knowledge and information with other users, which may show that altruistic information sharing behaviors take an important role to develop and support such healthy online communities. In addition, learning is also one of the prominent motivation factor for answering a question on Brainly, which illustrates that "social practices that construct informal learning-teaching formations through the question-answering processes among online Q&A users" (Choi & Shah, in press). Although it was found that reputation is not the critical motivational factor answering a question on Brainly, future studies may also investigate practical implications of how gamification (e.g., rank, point, etc.) help users participate more in answering activities

to increase user engagement in online learning environments. Table 4 illustrates the details of motivational factors for answering a question on Brainly.

Motivation for answering a question	Mean	S.D
I can receive points and raise my rank on Brainly	3.85	1.17
I can enhance my reputation on Brainly	3.69	1.21
It is fun to answer a question	4.18	1.00
I like helping other students with my answer	4.63	0.68
It encourages me to be connected to others on Brainly	3.87	1.05
I also learn through answering questions	4.31	0.93
I have had similar homework problems before	3.79	1.11
Others answered my questions before, so I also want to return the favor by answering questions	3.73	1.27

Table 4. Motivations for answering a questions on Brainly

5 Conclusion

Learning with peers can be defined as “the acquisition of knowledge and skill through active helping and supporting among status equals or matched companions” (Topping, 2005, p.631). Social Q&A services are an extension of forms of reciprocal peer learning, which is designed to create online communities for seeking and sharing information; Social Q&A users are also able to cooperatively seek and share educational knowledge and information via question-answering interactions.

The current study attempts to conceptualize Brainly users’ unique contextual situations by focusing on motivational factors of asking and answering a question. There is a hope that this approach will open new opportunities for further research works in order to investigate if there may be any cultural differences in users’ motivations of participating in question-answering interactions. Additionally, future studies may also attempt to investigate any practical implications by new product developments and designs to sufficiently fulfill users’ motivation when either asking or/and answering a question online.

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