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Knowledge Sharing among Accounting Academics in an Electronic Network of Practice

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SYNOPSIS: Using a multi-method approach, we explore accounting academics' knowledge-sharing practices in an Electronic Network of Practice (ENOP)—the Accounting Education using Computers and Multimedia (AECM) email list. Established in 1996, the AECM email list serves the global accounting academic community. A review of postings to AECM for the period January–June 2006 indicates that members use this network to post questions, replies, and opinions covering a variety of topics, but focusing on financial accounting practice and education. Sixty-nine AECM members constituting 9.2 percent of the AECM membership base responded to a survey that measured their self-perceptions about altruism, reciprocation, reputation, commitment, and participation in AECM. The results suggest that altruism is a significant predictor of posting frequency, but neither reputation nor commitment significantly relate to posting frequency. These findings imply that designers and administrators of the recently launched AAA Commons platform should seek ways of capitalizing on the altruistic tendencies of accounting academics. The study's limitations include low statistical power and potential inconsistencies in coding the large number of postings.

Keywords: accounting academia; electronic network of practice; ENOP; knowledge sharing.

Data Availability: Contact the authors.

INTRODUCTION

Electronic mailing list software that first emerged in the early 1980s has become a popular application on the Internet. The technology has quickly matured and has enabled the formation of thousands of electronic networks of practice (ENOP) to serve both professionals working in specific fields and those with common interests. A network of practice is a

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group of individuals, loosely connected and often geographically dispersed, who share a common practice (Brown and Duguid 2001). A profession is one example, as is an academic discipline, which “join(s) departments from universities around the world to make up groups, whose members, to the extent that they have common practices, are able to read and understand one another’s work” (Brown and Duguid 2001, 206). An ENOP is a network of practice whose members communicate using electronic media, such as email, blogs, and listservs. As of July 2008, the top 20 public ENOP email lists served approximately 19.6 million subscribers.¹ A more recent form of ENOPs, web-based social and professional networking sites such as Facebook and LinkedIn, has flourished given their use of simple browser-based technology. The recently launched AAA Commons platform is essentially a web-based ENOP designed to encourage American Accounting Association (AAA) members to interact and share knowledge about research and teaching issues. Despite the proliferation of email list and social/professional networking technologies, little is known about the antecedents to and consequences of participation in ENOPs. Understanding the driving forces behind successful ENOPs will allow designers and sponsors of professional networking sites such as AAA Commons to pursue appropriate strategies to promote their widespread adoption.

In their pioneering work in this domain, Wasko and Faraj (2005) established that participation in an ENOP is driven largely by three factors: commitment, altruism, and reputation. Their study, however, explored only a single email list serving the legal profession. In light of the wide range of fields in which ENOPs have been established, it is worth investigating whether Wasko and Faraj’s (2005) findings hold in other contexts where commitment, altruism, and reputation are not *prima facie* as salient as in the legal profession. The purpose of this study is to explore relevant elements of Wasko and Faraj’s (2005) model of knowledge-sharing in the context of an academic-based ENOP, since academics are likely to exhibit different degrees of commitment, altruism, and reputation-seeking tendencies relative to members of the legal profession. We discuss how members’ motivations for participating in an academic-based ENOP differ from members’ motivations in prior studies of electronic networks. We then explore how commitment, altruism, and reputation-seeking tendencies influence knowledge-sharing behavior among accounting academics. A key motivation for our analysis of an academic-based ENOP is to discern potential implications for AAA Commons.

Academics share knowledge through various communication channels. They read and publish journal articles, meet face-to-face at work and conferences, and discuss issues related to their research and teaching with colleagues via phone and email (Carley and Wendt 1991). Over the past 12 years, however, the Accounting Education using Computers and Multimedia ENOP (AECM) has emerged as an innovative email-based method for academic accountants to share ideas and knowledge (Jensen 2007). According to Wasko and Faraj (2005, 36), “Electronic networks make it possible to share information quickly, globally, and with large numbers of individuals.” The AECM offers academic accountants a means to communicate easily and frequently with a geographically diverse group of their peers, many of whom they have never met in person.² Individuals can share knowledge and information, ask practical or theoretical questions, discuss

¹ Listserv Top 20 Statistics for July 2008. Source site: <http://www.lsoft.com/ltop/LTOP-200807.HTML>. L-Soft, the company that sells the leading email list software under the “Listserv” brand name, has some 3,700 customers in various industries (e.g., computer and technology, healthcare, media, and publishing) and in government, education and academic, politics, and nonprofit organizations (see <http://www.lsoft.com/customers/customers.asp>).

² In the current study, we find that 31 percent of survey respondents have never met another member in person and that 50 percent have met only one or two other members in person.

accounting-related issues, or make announcements. The longevity of AECM, its consistent level of daily activity, and its level of contributions from members around the world qualifies it as a prominent, active ENOP for accounting academics.

Using archival information, we first determine members' posting frequency and analyze patterns of the discussions that members engage in using AECM. We combine this information with members' survey responses, and examine the relationship between members' self-perceptions and their propensity to post to the ENOP. Using a validated instrument, we identify three factors: commitment, altruism, and reputation. Contrary to Wasko and Faraj's (2005) findings, our results indicate that academics do not recognize reciprocation as a factor in ENOP participation. Of the three factors identified above, only altruism is a significant factor in members' actual posting frequency. Although Wasko and Faraj (2005) find that reputation is a significant predictor of posting frequency, we find no such relationship for either actual posting or self-reported posting. This result suggests that in an academic ENOP, members do not perceive that they are seeking prestige or enhancing their reputation through their participation. We also explore relationships between these three factors and members' self-reported participation measures: length of association in the ENOP, posting frequency, and reading frequency. We note significant positive correlations between commitment and both reading and posting frequency, indicating that members value the ENOP for what they get out *and* what they perceive they put in. We also find a significant positive relationship between altruism and self-reported posting frequency, again supporting the idea that members contribute to the ENOP to help others. Additionally, both ENOP reading frequency and ENOP posting frequency are positively associated with perceptions of the degree to which the ENOP assists with members' jobs. These findings have practical relevance for AAA Commons. Specifically, our analysis of AECM suggests that accounting academics use it primarily for conducting what we call *electronic asynchronous conversations*. While a relatively small fraction of AECM traffic comprises questions and responses to technical accounting education or research issues, the vast majority of activity consists of accounting academics sharing their views on a variety of topics, not all of which relate directly to accounting education or research. For example, it is common for AECM discussions to cover current political events, proposed federal regulations, and tips on computer software applications. Although AAA Commons is a web-based application and is significantly more feature-rich compared with the email-based AECM, creators of AAA Commons should consider our findings when choosing designs for their academic knowledge-sharing platform.

The paper proceeds as follows. First, based on select components of the Wasko and Faraj (2005) model, we pose research questions about knowledge-sharing among accounting academics; then we discuss the method, followed by results. We conclude with a discussion of our findings and provide avenues for future research.

BACKGROUND AND RESEARCH QUESTIONS

Electronic Networks of Practice and AECM

Knowledge management is a broad area encompassing knowledge capture, knowledge conversion, connections of people and knowledge, and measures of knowledge (O'Leary 2002). Accounting and other professional services firms traditionally use two types of knowledge bases: knowledge repositories, which store information about topics, and knowledge networks, which store information about people and their expertise. In an investigation of the factors that may enhance or hinder knowledge-sharing in public accounting firms, Vera-Muñoz et al. (2006) identified three factors that spurred knowledge-sharing—information technology, formal and informal interactions among auditors, and reward systems. While in-house knowledge bases and knowledge-sharing within organizations serve internal knowledge needs, they do not cross over organizational boundaries.

Networks of practice offer an alternative method for sharing knowledge across a profession as a whole (Faraj and Wasko 2007). A network of practice offers geographically dispersed members of the same profession (independent of organization), an opportunity to share and gather information without face-to-face meetings (Brown and Duguid 2001).³ As Wasko and Faraj (2005, 37) state, an *electronic* network of practice is one in which "sharing of practice-related knowledge occurs primarily through computer-based communication technologies." Listservs differ from other forms of electronic networks of practice in three ways: there is no designated leader (as in a forum), membership is open to anyone with an Internet connection and an email account, and contributors have no control (or knowledge) over who views their contributions (Jensen 2007). About 12 years ago, Professor Barry Rice at Loyola College in Maryland began the Accounting Education using Computers and Multimedia (AECM) email list, which in effect serves as an open ENOP for accounting academics. As of July 2008, the AECM forum had 724 members. As the name implies, this ENOP began as a place for accounting academics to share information about developments in technology that would be of interest to educators. Over time, the ENOP evolved to include much broader topics. Robert Jensen, a daily contributor to AECM, describes the many benefits of membership in an ENOP. These benefits include access to news items of common interest (especially Internet links), the ability to ask questions and receive answers about relevant accounting topics, the ability to view and contribute to debates (especially about theories), exposure to new ideas, sharing of research works-in-progress, and access to an archived database (Jensen 2007). ENOPs also enhance social capital and networking by providing entertainment, offering friendship and reputation-building opportunities, and encouraging nonacademics to investigate the profession (Jensen 2007). ENOPs are both an effective and an efficient method of sharing knowledge within a profession.

The ENOP email list format allows the site to develop based on the demands and interests of its members. This member-driven approach produces a setting in which the topics retain their relevancy to the group. Efficiency arises from the computer-based context. The use of email allows asynchronous communication so members participate at their own convenience and without time limits. Members also have access to an archive that includes past discussions on the list. From a cost/benefit perspective, efficiency gains arise from the active participation of members who post without tangible incentives.

Why Do Members Share?

McDermott (1999) defines knowledge-sharing as guiding individuals through their thinking or using their own knowledge to help others reframe their own circumstances in a way that encourages problem solving. To guide someone effectively, knowledge-sharers should understand the background and needs of the person requesting help. In an academic-based ENOP, members have a common language and face common problems. Members have relatively similar job descriptions (teaching, research, and service). Accounting academics' jobs require them to be autonomous; although they must meet high expectations, their work is not subject to daily scrutiny. Additionally, at many institutions, there is often only one accounting faculty member in some sub-disciplines (e.g., accounting information systems, tax), leaving such faculty with few opportunities to rely on local colleagues for advice and help. ENOPs provide an environment in which academics facing similar challenges can effectively meet and assist each other.

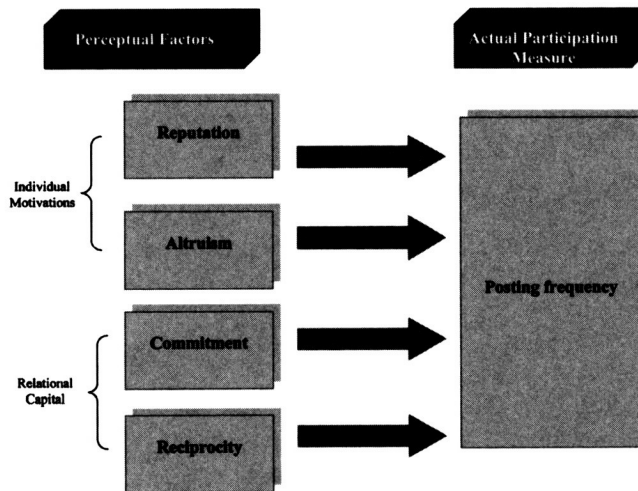
Individuals share knowledge within an organization for various reasons. It may be part of

³ Note that a network of practice differs from a community of practice. Communities of practice are generally organization-specific and can be organization sponsored. Individual members often know each other and work together toward similar goals (Brazelton and Gorry 2003; Wasko and Faraj 2005).

their job description; they could receive monetary or intangible rewards; or they might simply enjoy helping others. In an ENOP environment, participation (both active and passive) is voluntary. There are no external expectations of knowledge-sharing and members receive no monetary reward. In some ways, ENOPs are public goods, characterized by their availability to all, regardless of individual member contributions. As such, they should be undersupplied (Thorn and Connolly 1987). Why, then, do members share their information, knowledge, and opinions? Applying theories of collective action, Wasko and Faraj (2005) examine how individual motivations and social capital influence knowledge contribution in an electronic network of practice used by members of a national legal professional association.⁴ Among other antecedents, their model predicted that reputation, altruism, commitment, and reciprocity would positively influence knowledge-sharing. In the legal ENOP that was the subject of their study, Wasko and Faraj (2005) found that members (lawyers) contribute knowledge to the network only when they perceive that it enhances their reputation.

We identify and isolate the two constructs tested by Wasko and Faraj that we believe are relevant to sharing among academics: *individual motivations*, comprising reputation and enjoyment of helping (altruism), and *relational capital*, comprising commitment and reciprocity. Figure 1 depicts the research model. Two unique aspects of accounting academia relative to the legal profession warrant this investigation. First, accounting academia is by definition dominated by individuals who are educators and thus may be inclined to help others. Accordingly, one would expect individual motivations such as altruism to be significantly stronger in an academic account-

FIGURE 1
Model of Knowledge Sharing



Adapted from Wasko and Faraj (2005).

⁴ They analyzed archival data comprising message postings within the ENOP over a four-month period and survey responses received from 173 members of the ENOP.

ing scenario. Second, given the context of the legal profession, a significant aspect of ENOP activity is likely to involve seeking answers to technical legal questions. By contrast, given the teaching and research focus of accounting faculty, it is less likely that members would turn to the ENOP for answers to technical, practical accounting issues. It is more likely that academics would engage in discussions, debates, and information dissemination, all of which are relatively more subjective types of knowledge-sharing activities. Appendix B provides three “exchanges of information” typical of AECM communications. A single question or comment related to research, teaching, or work issues in academia triggers each discussion; the unique nature of communication within AECM is evident in the variety of the responses generated. These responses range from general to specific, from opinion to objective fact, and from discrete answers to new questions or comments. Given the difference in members’ expected altruism levels and the types of knowledge shared between academics, it is worthwhile to investigate whether the Wasko and Faraj findings hold in an academic ENOP.

Individual Motivations

First, we examine how the individual motivations, reputation and enjoyment of helping (altruism), can influence members’ propensity to share. We begin with reputation, defined as “recognition by other people of some characteristic or ability” or “public esteem or regard” (Merriam-Webster 2005). Social exchange theory explains that people engage in social behavior as a means to gain both tangible goods and intangible benefits, such as approval or prestige (Homans 1958). Blau (1964) extends social exchange theory beyond an economic exchange to focus on social benefits as a motivator for continuance of social interaction. These benefits include recognition, status, and admiration. Active participation in an ENOP provides an environment for social interaction. When members post frequently to an ENOP, the membership begins to recognize them, and the members develop a reputation based on their contribution(s).⁵ Prior studies have demonstrated that reputation is a strong motivation for publicly sharing information in an ENOP (Wasko and Faraj 2005; Donath 1999). Social exchange theory provides additional support for a group reputation effect, as noted by Zafirovski (2003). When professionals view an individual as an active part of an esteemed group, the group’s positive reputation can transfer to the individual, further supporting the idea that reputation effects can arise from ENOP participation.

Although reputation effects are significant predictors of participation in other professional ENOPs, there is reason to believe that prestige-seeking behavior is not a significant motivator for contribution by accounting academics. Status in academe arises from publication successes, research discoveries, public service to the AAA and other organizations, and achieving tenure or a chaired position. Applying significant effort to posting on an ENOP, which offers no official or organizational acknowledgment, does not appear an efficient method of boosting reputation within the profession as a whole.

Regardless of professional choice, academics are still human, and thus exhibit basic human behaviors. Therefore, reputation building might be a motivator for posting frequency. Thus, we propose the following research question.

RQ1: Do members who perceive that participation will enhance their reputations in the profession post more frequently to the ENOP?

We next consider altruistic tendencies and their influence on posting frequency. Individuals at times enjoy helping others. Given that ENOPs offer no tangible benefits, intangible benefits such as enjoyment derived from helping others solve problems could motivate members’ propensity to

⁵ Posts include individuals’ email addresses, so members learn the identity of the poster.

share. This possibility is especially salient in an academic ENOP. By professional choice, academics are teachers; by nature, teachers are inclined to help others learn.⁶ Knowledge sharing is a crucial part of an academic's job. Prior research has found that altruism (enjoyment from helping) significantly influences knowledge contribution; both quantity (Kankanhalli et al. 2005; Marks et al. 2008) and quality (Wasko and Faraj 2005). Although not a certainty, it is likely that those who choose academe enjoy sharing their knowledge. Thus, those who enjoy helping should be more active within the ENOP.

Academics also seek to create knowledge and specialize in certain fields. To the extent that the profession knows them for possessing some form of special expertise, one could argue that academics would be reluctant to share their expertise freely—they might fear that individuals would no longer seek them out for that knowledge. It is also possible that absent rewards, the enjoyment derived from helping is insufficient to promote active involvement. Considering the sterility of an ENOP (asynchronous communication, no guarantee of feedback, and no knowledge of who will benefit from postings), it is possible that the enjoyment teachers receive from helping students and colleagues face-to-face will not translate well to an ENOP environment. Given this tension regarding accounting academics' altruistic tendencies in an ENOP context, we pose the following research question.

RQ2: Do members who enjoy helping others post more frequently to the ENOP?

Relational Capital

Next, we examine relational capital, both commitment and reciprocity, and their relationship with members' posting frequency. Relational capital is the degree of trust and respect group members have for one another (Cousins et al. 2006). Group membership motivates members to assist other members in the collective group goals. One measure of relational capital, commitment, "conveys a sense of responsibility to help others within the collective on the basis of shared membership" (Wasko and Faraj 2005, 42). Online community members develop close friendships even without personal meetings (Hiltz and Turoff 1993). These social networks lead members to value the ENOP for the opportunity to help and to receive help as well as for the intangible social connections they provide. As such, committed members would likely make efforts to maintain the ENOP, by participating in ongoing discussions and passing along information. They might also miss the ENOP if it were no longer available. Based on the above discussion, we pose the following research question.

RQ3: Do members who are committed to the ENOP post more frequently?

Another dimension of relational capital is reciprocity, the belief that individuals should mutually assist each other, and that when helped, one should "return the favor." Reciprocity online provides a means for developing self-esteem and conforming to social norms of mutual aid expectations (Kollock and Smith 1996). Wellman (1997) posits that online groups are mutually supportive and that social norms of reciprocity and group citizenship motivate their members to continue participation.

There are reasons why academics may not attend to social norms. As stated earlier, academics are teachers. As such, they routinely communicate knowledge without any expectation of recip-

⁶ According to the U.S. Department of Labor's O*NET database (an occupational information network at <http://online.onetcenter.org/>), the work activities of business teachers include coaching and developing others, defined as "identifying the developmental needs of others and coaching, mentoring, or otherwise helping others to improve their knowledge or skills."

rocaation from their students.⁷ Education is primarily unidirectional; students expect to learn from teachers. Based on the nature of academics' interactions and job descriptions, it is possible that the social norms of reciprocation are not salient to educators. Thus, reciprocation may not influence members' posting frequency. We explore this relationship by posing the following research question.

RQ4: Do members who are accustomed to social norms of reciprocation in an academic setting post more frequently to the ENOP?

Perceptions of ENOP Helpfulness

Although participation in an ENOP may be its own intrinsic reward for many members, the knowledge shared in the ENOP is likely to benefit members in their jobs. In the AECM in particular, members often pose questions relating to specific aspects of their teaching and research job responsibilities. Although the true effect of knowledge-sharing is difficult, if not impossible, to measure, we explore how members perceive ENOP participation (both reading and posting) to be beneficial on the job. We predict that aside from the antecedents to knowledge-sharing discussed earlier, members experience some direct benefit of either receiving (reading) or providing (posting questions, replies, or opinions) information on the ENOP.

Members who passively participate by scanning or searching posts on the ENOP could use this information to help them directly with their teaching or research, or merely read to become more informed about issues and problems pertaining to accounting instruction or research. The AECM provides a wide variety of information, the relevance of which depends on members' particular interests. Frequent or daily readers are more likely than are occasional readers to come across relevant information that they can then use to increase their knowledge and apply to their jobs. Thus, we explore whether reading frequency is positively associated with perceptions of the degree to which the ENOP assists with members' jobs.

RQ5a: Is reading frequency positively associated with perceptions of the degree to which the ENOP assists with the job?

Posting activity includes asking questions, delivering replies, and sharing opinions. Although none of these actions directly implies receipt of knowledge, it is possible that the act of posting inherently involves some degree of learning (e.g., we learn as we teach) thereby positively influencing perceptions of the degree to which the ENOP assists with the job. When members participate actively by posting questions in the ENOP, they do so with the expectation that another member will answer their questions. To the extent that their expectations are met, active involvement in the ENOP is more likely to lead to perceptions of ENOP helpfulness on the job. On the other hand, members who rarely post possibly have lower expectations that ENOP members would respond, and thus would likely view the ENOP as being less helpful on the job. We explore whether posting frequency is associated with perceptions of the degree to which the ENOP assists with the job.

RQ5b: Is posting frequency positively associated with perceptions of the degree to which the ENOP assists with the job?

We acknowledge that the above research questions (RQ5a and RQ5b) are not causal inquiries—it is just as likely that members who view the ENOP as not being helpful on the job choose to participate less actively in it.

⁷ Reciprocation here refers to new knowledge communicated by students to their teachers.

Additional Analysis: Patterns of Participation and Longevity of the ENOP

AECM has been active for over 12 years; a relatively long time for a voluntary, geographically dispersed group. As part of additional analysis, we explore the relative participation of members by focusing on the “lurking” phenomenon. Monge et al. (1998) describe knowledge repositories as public goods because individuals can use the knowledge without making any contributions. In addition, such use does not preclude others from using the knowledge. As such, individuals can benefit from the knowledge without anyone demanding reciprocation or payment. Active posting members do not have a way of knowing who is accessing the knowledge they share on the ENOP. Free riders, known as *lurkers* in an online setting, make use of posted knowledge but do not actively contribute to the ENOP. In other words, lurkers are passive participants in the ENOP. Since the longevity of an ENOP depends on the continuous voluntary contributions of its members, an ENOP with many passive participants (lurkers) and few active participants (contributors) is in danger of failing. It is interesting to investigate whether the AECM has survived because it has many active participants (i.e., contributors) or because the few contributors it has are dedicated and prolific. We pose the following research question.

RQ6: What is the pattern of active to passive participation in AECM?

METHOD

We chose the AECM because it is firmly established (started in 1996), is currently active, serves a narrow range of members (accounting academics), is public, and is independent from any commercial or governmentally regulated enterprise. The ENOP format is similar to a bulletin board and allows individuals to begin new threads or respond to existing threads. Individuals choose to receive postings individually or in digest form (once per day). Members must register online to participate; however, there are no restrictions on who may register.⁸ Archives are stored by week, and members can sign on anytime to access the archives online.

With the permission of the ENOP administrator, we downloaded all archived postings (1,357) from the ENOP for January 1, 2006, to June 30, 2006.⁹ To better understand the nature of the communication and the types of knowledge shared, we had two independent coders (graduate business students) classify postings by content type (general knowledge, IT knowledge, news item, accounting practice, auditing practice, research, teaching, and other) and by post type (announcement, comment, news alert, opinion, question, and reply).¹⁰ These data regarding the content and types of postings to AECM should indicate the patterns of activity that might occur at AAA Commons. This knowledge might be useful in assisting developers of AAA Commons.

In addition to collecting the archival data regarding ENOP postings, we surveyed participants about their feelings toward the ENOP and their motivations about their participation choices. We gathered participants' names and email addresses from the archival posts. Approximately six months after the sample period, we sent a personalized email to each poster requesting that they complete a short online survey. When responding to the survey, posters entered a unique four-digit “member id,” which enabled us to link survey responses to posting behavior. Two weeks after a second reminder, we posted an open survey invitation to any ENOP member who had not received

⁸ Registration requires an active email address.

⁹ During this period there appeared to be no major events that would influence accounting or academic practice or online knowledge sharing.

¹⁰ Analysis of the degree of inter-coder agreement revealed a low to moderate degree of agreement ($\kappa = 0.371$ for content area and 0.359 for post type). This low degree of agreement was not unexpected given the large number of posts coded and the subjectivity involved in categorizing posts. One of the authors reviewed the coding and resolved differences.

a prior email request. Respondents to this open invitation were requested to enter a different sequence of the four-digit ID number, to distinguish these responses (which could not be tied to posting behavior for our six-month window) from those that could be linked to posting behavior.

RESULTS

Description of ENOP Activity

In contrast to the legal professional ENOP studied by Wasko and Faraj, the 1,357 AECM ENOP postings during the six-month period (January–June 2006) represent diverse forms of communication. Notably, there are few questions (5 percent), but many replies (53 percent), and close to as many opinions (38 percent). Other post types include announcements (2 percent), comments (2 percent), and news (<1 percent). The nature of the exchange between members is less of a “question and answer” type of exchange and more like an online, ongoing discussion, perhaps because of the unique nature of academic discourse. Indeed, the patterns of activity at AECM are best characterized as *electronic asynchronous conversations* among accounting academics.

Topics were concentrated among accounting (44 percent), business (38 percent), and accounting information systems (9 percent). Within accounting, 39 percent related to financial accounting, 20 percent to auditing, and 14 percent to general accounting. Contrary to the original purpose of the ENOP, as a method of dispersing education technologies, education was a topic in only 9 percent of posts. Within business, 73 percent related to general business, and 13 percent to general computing. In the education category, 60 percent of posts related to general education, while 28 percent related to graduate/doctoral education. Overall, about 6 percent of posts related to accounting research, indicating that while academics do not use the ENOP as a primary tool for research exchange, some research-related discussion is present.

ENOP Survey Data: Responses to Questionnaire

We sent a personalized email survey request to all participants of the AECM who had any activity (question, reply, opinion, etc.) in the first six months of 2006. Of the 126 members to whom we sent the email, we received usable responses from 53 members, yielding a response rate of 42.1 percent. In addition to the personalized individual emails to members soliciting participation in the survey, we posted an open invitation on the ENOP. We received an additional 16 responses to this invitation.¹¹ Of the approximately 750 members of AECM during early 2006, we received responses from 69 or about 9.2 percent of members.¹² We compared participation rates of respondents (mean of 6.83 posts) versus nonrespondents (mean of 6.58 posts), noting no significant difference ($p = 0.885$) in participation rates.¹³ This finding suggests that respondents do not significantly differ from nonrespondents with respect to ENOP activity.

Table 1 contains demographic data on the 69 survey respondents. The majority of survey respondents were male (70 percent) and over 55 years of age (53 percent). This mirrors the accounting academic population. Data from Hasselback and Carolfi (1995) indicate that 75 percent of accounting faculty is male and Hasselback (2007) reports that 53.4 percent of accounting faculty is 55 or older. Forty-five (65 percent) respondents had terminal degrees and were tenured or tenure-track faculty with teaching, research, and service responsibilities. Forty-eight (70 per-

¹¹ These members were either new members—those who joined after June 2006—or those who did not post during the first half of 2006.

¹² Wasko and Faraj (2005) received 173 responses from a 7,000 member strong ENOP, for a response rate of 2.5 percent.

¹³ We measure participation rates as the number of posts in the six-month period; we exclude one outlier from this analysis.

TABLE 1
Demographics—AECM Survey Respondents (n = 69)

		<u>Count</u>	<u>Percentage</u>
Gender	Male	48	70
	Female	21	30
Age	35–44	10	15
	45–54	22	32
	55–64	32	46
	65–74	5	7
Highest Degree	Bachelor's	8	12
	Master's	16	23
	Doctorate	45	65
Occupation	Academic (Teaching, Research, Service)	45	65
	Academic (Teaching only)	13	19
	Academic (Retired)	3	4
	Student	1	1
	Practitioner (Public)	2	3
	Practitioner (Industry)	2	3
	Practitioner (Government)	2	3
Academic Rank	Practitioner (Govt. Retired)	1	1
	Instructor/Lecturer	9	13
	Assistant Professor	8	12
	Associate Professor	21	30
	Full Professor	19	28
	Professor Emeritus	3	4
Location	Other	9	13
	Northeast United States	11	16
	Middle Atlantic United States	9	13
	Southeast United States	13	19
	Midwest United States	8	12
	Northwest United States	3	4
	Southwest United States	4	6
	Western United States	12	17
	Canada	1	1
	United Kingdom	2	3
	Continental Europe (non-U.K.)	1	1
	Australia	3	4
Certifications	Other	2	3
	CPA/CA only	27	39
	CPA/CA with other certifications	15	22
	Other certification (CMA, CIA, CISA, etc.)	8	12
	No certifications	19	27

cent) respondents were assistant, associate, or full professors. Geographically, respondents appeared to be scattered throughout the United States, with the Northwest and Southwest regions being somewhat underrepresented. Twelve percent of respondents were from outside the United States and Canada, highlighting the global composition of AECM participants and AECM's ability to reach across borders.¹⁴ While 27 percent of respondents held no certifications, 61 percent were certified or chartered accountants (with or without other certifications).

We asked respondents to indicate their primary and secondary areas of teaching and research. Table 2 includes the results. Interestingly, close to 40 percent of respondents have a primary teaching interest in financial accounting.¹⁵ The next most prominent primary teaching interest is information technology/systems, which is not surprising given the original intent of the ENOP and the high probability that individuals who teach in this area are more likely than general accounting academics to be aware of online groups. Regarding research interests, again financial accounting and IT/systems tend to dominate. It is interesting to note that a significant number of ENOP participants either do not conduct research or do so in a nonmainstream area of accounting.

The survey instrument contained a series of questions aimed at eliciting respondents' relationship with the ENOP. Table 3 shows data regarding respondents' length of association with the ENOP, frequency of reading ENOP posts, frequency of posting to the ENOP, and frequency of contacting ENOP members outside of the ENOP (i.e., by separate email or phone). The vast majority of respondents (68 percent) reported being associated with the ENOP for five to ten years. As an indication of their level of interest in the ENOP, 93 percent of respondents reported reading items on the ENOP at least once a week, with 65 percent reading ENOP posts daily. The

TABLE 2
Areas of Interest—AECM Survey Respondents

	Teaching				Research			
	Primary (n = 61)		Secondary (n = 61)		Primary (n = 60)		Secondary (n = 61)	
	Count	%	Count	%	Count	%	Count	%
Auditing	6	10	7	11	2	3	12	20
Financial accounting	24	39	8	13	12	20	3	5
Governmental accounting	0	0	1	1	0	0	2	3
IT/Systems	18	30	9	15	15	25	8	13
Management consulting	0	0	2	3	—	—	6	10
Managerial accounting	10	16	15	25	5	8	6	10
Tax	2	3	4	7	2	3	5	8
Other	1	2	15	25	14	24	9	15
Do not conduct research					10	17	10	16

¹⁴ As a comparison, AAA foreign membership (outside the United States and Canada) as of July 2008 was 21 percent.

¹⁵ This percentage is likely a rough reflection of the population. A recently published report by the joint AAA/APLG/FSA committee indicates that 49 percent of faculty and 52 percent of doctoral students have a research interest in financial accounting (Behn et al. 2008). Accordingly, it is reasonable to estimate that at least 40 percent of the population of accounting educators has a teaching interest in financial accounting.

TABLE 3
Survey Respondents' Relationship with AECM (n = 69)

Panel A: Length of Association

	<u>Count</u>	<u>Percentage</u>
Less than one year	2	3
One year to three years	9	13
More than three years and less than five years	11	16
Five years to ten years	<u>47</u>	<u>68</u>
Total	69	100

Panel B: Frequency of Reading

	<u>Count</u>	<u>Percentage</u>
Inactive (do not read ever)	0	0
Read Seldom (less than once per month)	2	3
Read Occasionally (more than once per month but less than once per week)	3	4
Read Frequently (once per week)	19	28
Read Daily	<u>45</u>	<u>65</u>
Total	69	100

Panel C: Frequency of Posting

	<u>Count</u>	<u>Percentage</u>
Inactive (do not post ever)	8	11
Post Seldom (less than once per month)	46	67
Post Occasionally (more than once per month but less than once per week)	13	19
Post Frequently (once per week)	1	1
Post Daily	<u>1</u>	<u>1</u>
Total	69	99

(rounding)

Panel D: How Often Do You Contact an ENOP Member Outside of the ENOP?

	<u>Count</u>	<u>Percentage</u>
Never	16	23
Seldom (less than once per month)	41	59
Occasionally (more than once per month but less than once per week)	12	17
Frequently (once per week)	0	0
Always (all contact is outside of the ENOP)	<u>0</u>	<u>0</u>
Total	69	99

(rounding)

data regarding posting frequency, however, suggest passive (reading) rather than active (posting) involvement, with only 2 percent of respondents posting to the ENOP at least once a week. We

find that only half of the respondents had met more than two members in person, while the other half had met two or fewer members. These findings suggest that the ENOP is the main communication among members.

A major reason for surveying participants was to elicit their perceptions in relation to the ENOP—the degree to which they value it, their inclination toward helping others on it, and reasons why they choose to participate in it. Wasko and Faraj (2005) employed 11 questions to elicit the perceptions of the participants in a legal professionals' ENOP. We used the same 11 questions, with appropriate rewording to conform to the academic nature of the ENOP. Participants responded on a five-point Likert scale, anchored by *strongly disagree* (1) to *strongly agree* (5). We performed a principal components factor analysis to ascertain whether the 11 questions loaded together in any pattern. Three factors emerged from our principal components analysis. We labeled the first factor *reputation* (participation improves my status in the profession, I participate to improve my reputation, and I earn respect from others by participating). We labeled the second factor *altruism* (I like helping other people; it feels good to help others; I enjoy helping on the ENOP; I know others would help me so it is only fair I help others). The third factor is *commitment* (I would feel a loss if the ENOP were no longer available; I really care about the fate of the ENOP; I feel loyalty toward the ENOP; I trust someone would help if I posted a question).¹⁶

Table 4 includes descriptive statistics for the three perceptual factors, comprising the means of the questions underlying each factor. For each factor, we ran a t-test to determine whether the mean differed significantly from the neutral point of 3. The results indicated that *reputation* was significantly lower than the midpoint in the direction of *disagree* ($t = 4.80$, $df = 68$, $p < .001$), *altruism* was significantly higher than the midpoint in the direction of *agree* ($t = 11.06$, $df = 68$, $p < .001$), and *commitment* was significantly higher than the midpoint in the direction of *agree* ($t = 9.52$, $df = 68$, $p < .001$). These results suggest that participants on average do not participate to improve their reputations. They do, however, participate to fulfill their altruistic tendencies and their commitment to the ENOP. By way of comparison, the mean for reputation in our study, 2.47, is somewhat lower than the mean for reputation in Wasko and Faraj's (2005) study, 2.60. The mean for altruism in our study, 3.93, is lower than the enjoy helping mean in their study, 4.08, and

TABLE 4
Descriptive Statistics for Self-reported Perception Factors^a

	<u>n</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Mean</u>	<u>Standard Deviation</u>
Reputation	69	1.00	5.00	2.4734	0.91181
Altruism	69	1.00	5.00	3.9312	0.69911
Commitment	69	1.25	5.00	3.8841	0.77124

^a Each measure is calculated using an average of responses to the relevant items. Participants responded on a five-point scale where 1 was *strongly disagree* and 5 was *strongly agree*.

¹⁶ Our principal components factor analysis results are quite similar to those of Wasko and Faraj (2005) with the exception of two questions. In the Wasko and Faraj (2005) study, the question "I know others will help me, so it is only fair I help others" loaded with the question "I trust someone would help if I posted a question" to form a separate "reciprocity" factor. In our analysis, these questions do not load together; thus we do not include a reciprocity factor.

the commitment mean of 3.88 in our study is quite similar to the commitment mean of 3.91 in their study.¹⁷

We performed a series of Chi-square analyses to investigate relationships between gender, age, rank/title, area of primary teaching, and research interest, and the three perceptual factors: reputation, altruism, and commitment. We found no significant relationships. Chi-square analyses also revealed no significant relationships between participants' primary teaching or research interests and any of the participation measures (length of association, participation as a reader, and participation as a poster).

We next investigated the degree to which the three perceptual factors were associated with three self-reported participation measures (length of association with the ENOP, participation as a reader in the ENOP, and participation as a poster in the ENOP). Table 5 shows Pearson correlations among these six variables, all significance values are two-tailed. We find a marginally significant positive correlation between length of association and self-reported posting frequency ($p = 0.056$), indicating that long-time members believe they post more frequently than newer members do. There is a significant positive correlation between participation as a reader in the ENOP and commitment ($p < .01$), suggesting that members value the ENOP for the knowledge they receive. Participation as a poster in the ENOP, that is, active participation, is significantly positively correlated with both the commitment ($p < .05$) and altruism factors ($p < .01$). These findings support the notion that members also value the AECM for the opportunity to share

TABLE 5
Pearson Correlations among Perceptual Measures of Participation in AECM (n = 69)
Coefficient (p-value)

	<u>How Long a Member of AECM</u>	<u>Participation as a Reader in AECM</u>	<u>Participation as a Poster in AECM</u>	<u>Commitment</u>	<u>Altruism</u>
Participation as a reader in AECM	0.056 (0.648)				
Participation as a poster in AECM	0.231 (0.056)	0.163 (0.182)			
Commitment	-0.064 (0.600)	0.343 (0.004)	0.246 (0.042)		
Altruism	-0.086 (0.482)	0.208 (0.086)	0.485 (0.000)	0.530 (0.000)	
Reputation	-0.157 (0.199)	-0.067 (0.584)	0.193 (0.113)	0.294 (0.014)	0.250 (0.038)

¹⁷ Two survey respondents reported being members for less than a year and consequently could not have posted to the ENOP in the first six months of 2006. Additionally, we identified an outlier who contributed 66 percent of posts. Results qualitatively differ with the addition of this individual; thus, we exclude this member's responses from the analysis.



knowledge. There is a significant positive correlation between commitment and altruism ($p < .01$) and commitment and reputation ($p < .05$). Finally, altruism and reputation are significantly correlated ($p < .05$).

Relationships between Perceptual Factors and Posting Frequency

As noted earlier, Figure 1 provides a visual representation of expected relationships. To investigate whether the three perceptual factors were associated with actual patterns of posting behavior in the first six months of 2006, we regressed the number of posts against the three perceptual factors, for the subset of survey respondents who were members in the first half of 2006, excluding one outlier ($n = 66$). Based on the significant correlations we observed among the perceptual factors, we evaluate the relationships using separate linear regressions to avoid multicollinearity issues. Table 6, Panel A provides descriptive statistics for the perceptual factors and for the actual number of posts, while Panel B shows correlations. Panel C provides results for each research question test.^{18,19}

Research Question 1 asked whether members who believed the AECM would improve their reputation would post more frequently. We find no support for reputation effects ($p = 0.213$); however low power may have prevented us from identifying a significant relationship. This result contrasts with Wasko and Faraj (2005) who found that reputation was significantly associated with posting frequency. As noted earlier, the mean score for reputation-seeking tendency in our study approximated the one observed in Wasko and Faraj's study. Although accounting academics display a similar level of reputation-seeking tendency in comparison with legal professionals, unlike for the legal ENOP, this tendency is not associated with posting patterns on the AECM ENOP. Research Question 2 asked whether altruism would positively influence posting frequency. Based on regression results, we find that members who enjoy helping also post more frequently ($p = 0.021$).²⁰ Again comparing our results with those of Wasko and Faraj (2005), while the degree of altruism in both studies is about the same, we find altruism to be significantly associated with posting frequency while Wasko and Faraj (2005) do not. It is interesting to note that our results for reputation and altruism differ from Wasko and Faraj (2005), suggesting that there may be differences between legal professionals and accounting academics, thus validating our intuition and motivation for the current study. One possible explanation for the significance of altruism relates to the nature of AECM, which, through the efforts of a key member, provides posted information to a freely available website. Thus, individuals post on the AECM not only to assist other members directly, but also to contribute to this ever-developing website. Research Question 3 asked whether commitment would positively influence posting level. We find no support for this ($p = 0.179$), suggesting that although members may value the ENOP, they do not necessarily value it for the ability to post frequently. Again, low power may have prevented us from uncovering a significant relationship.

Tests of Helpfulness

To test RQ5a and RQ5b, we conducted Chi-square analyses focused on the relationship between patterns of involvement in the ENOP (participation as a reader, participation as a poster) and the extent to which members perceived the ENOP as being beneficial. The survey elicited

¹⁸ Reported results are one-tailed for all directional tests.

¹⁹ Note that we do not test RQ4, because our analysis did not reveal an individual reciprocation factor. This finding contrasts with Wasko and Faraj (2005), who find that posting frequency is significantly associated with reciprocity, again highlighting the differences between legal professional and accounting academics.

²⁰ We note that while survey respondents may be more altruistic than nonrespondents, resulting in a self-selection bias, the altruism measure among respondents varied enough for us to detect a significant difference in participation rates.

TABLE 6
Linear Regression Results

Panel A: Descriptive Statistics

	<u>Mean</u>	<u>Standard Deviation</u>	<u>n^a</u>
Number of posts on AECM, in first 6 months of 2006	4.85	7.63	66
Commitment	3.85	0.77	66
Altruism	3.91	0.69	66
Reputation	2.43	0.87	66

Panel B: Correlations (one-tailed significance level)

	<u>Number of Posts on AECM, in First Six Months of 2006</u>	<u>Reputation</u>	<u>Altruism</u>
Reputation	0.024 (0.425) n = 66		
Altruism	0.252 (0.021) n = 66	0.202 (0.049) n = 68	
Commitment	0.115 0.179 n = 66	0.252 (0.019) n = 68	0.514 (0.000) n = 68

Panel C: ANOVA^b

<u>Model</u>		<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>Sig.</u>	<u>Beta Error Prob.</u>
RQ1:	Regression	2.131	1	2.13	0.036	0.425	0.54
Reputation:	Residual	<u>3784.354</u>	64	59.131			
	Total	3786.485					
RQ2:	Regression	240.610	1	240.610	4.343	0.021	0.60
Altruism	Residual	<u>3545.875</u>	64	55.404			
	Total	3786.485	65				
RQ3:	Regression	50.178	1	50.178	0.860	0.179	0.63
Commitment	Residual	<u>3736.306</u>	64	58.380			
	Total	3786.485	65				

^a Note: difference in number of participants (n = 69 in Table 4) is a result of removing two respondents who were not members in the first six months of 2006, and one outlier respondent.

^b Dependent variable: Number of posts on AECM, in first six months of 2006.



three perceptual measures of the benefits participants might derive from the ENOP: (1) the degree to which the ENOP assists with their jobs as academicians; (2) the degree to which the ENOP information pertains to current events; and (3) the degree to which the ENOP information pertains to their occupation. We found two significant relationships. As shown in Table 7, members who were daily readers of the AECM were significantly more likely to rate the ENOP as being "somewhat" or "very" helpful to their jobs than were members who were occasional readers. We observed a similar pattern for posting frequency. As shown in Table 8, those who posted rarely or often were significantly more likely than were those who never posted to rate the ENOP as being helpful on the job. Taken together, these results suggest that participation in the ENOP, either as a reader or as a poster, fosters positive feelings toward the ENOP in terms of the degree to which participants perceive it to be helpful with their jobs as academicians.

Number of Postings by Members

To answer RQ6, that is, to evaluate the relative contribution of each member, we analyzed the number of posts by members. One, a retired faculty member, was a statistical outlier, posting 525 times. Although we exclude this member to conduct our subsequent analysis, we cannot overlook the apparent importance of this individual in generating activity within AECM. This individual

TABLE 7

Cross-Tabulation: Participation as a Reader in AECM × Degree to which ENOP Assists with Job

Panel A: Cell Counts

		Degree to which Listserv Assists with Job				Total
		Unhelpful	Neither Helpful nor Unhelpful	Somewhat Helpful	Very Helpful	
Participation as a reader in AECM	Read occasionally	1	6	16	1	24
	Read daily	0	4	26	15	45
	Total	1	10	42	16	69

Panel B: Chi-square Tests

	Value	df	Asymp. Sig. (two-sided)
Pearson Chi-square	10.624 ^a	3	0.014
Likelihood Ratio	12.399	3	0.006
Linear-by-Linear Association	10.276	1	0.001
Number of Valid Cases	69		

^a Three cells (37.5 percent) have expected count less than 5. The minimum expected count is 0.35.

TABLE 8

Cross-Tabulation: Participation as a Poster in AECM × Degree to which ENOP Assists with Job

Panel A: Cell Counts

		Degree to which ENOP Assists with Job				Total
		Unhelpful	Neither Helpful nor Unhelpful	Somewhat Helpful	Very Helpful	
Participation as a poster in AECM	Never	1	0	6	1	8
	Rarely	0	10	26	10	46
	Often	<u>0</u>	<u>0</u>	<u>10</u>	<u>5</u>	<u>15</u>
	Total	1	10	42	16	69

Panel B: Chi-Square Tests

	Value	df	Asymp. Sig. (two-sided)
Pearson Chi-square	14.215 ^a	6	0.027
Likelihood Ratio	13.992	6	0.030
Linear-by-Linear Association	3.207	1	0.073
Number of Valid Cases	69		

^a Eight cells (66.7 percent) have expected count less than 5. The minimum expected count is 0.12.

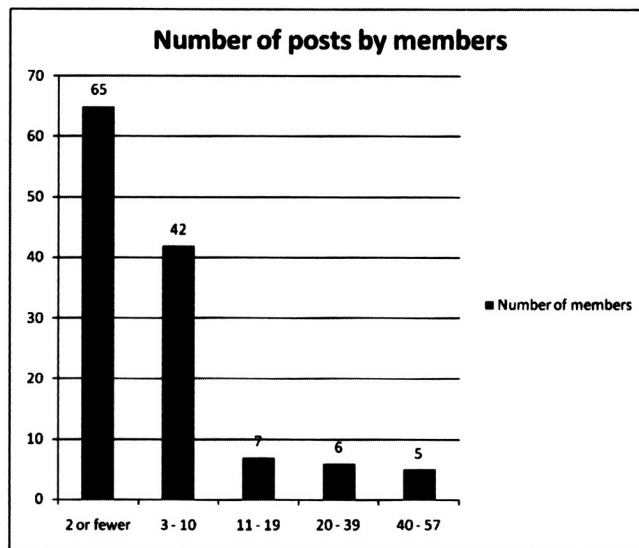
contributed virtually every day during our sample period, posting 45 questions, 303 opinions, and 152 replies. Undoubtedly, this member’s presence strongly influences the topics and discussions on AECM. AAA Commons and other ENOP administrators should note the effects of a prolific poster on activity levels within knowledge-sharing sites.

Excluding this outlier, the number of posts by a single individual ranged from one to 57, with a mean of 6.63 ($\sigma = 10.51$). The median was two, indicating a positively skewed distribution. As seen in Figure 2, 65 members posted two or fewer times and 42 posted between three and 10 times. One hundred and seven (85 percent) posters posted less than 10 times, while 18 (14 percent) posters posted between 11 and 60 times. It is evident that over the six-month period (January–June 2006), the minority of members was responsible for the majority of postings. Excluding the outlier, 48 percent of the posts were from 9 percent of the survey respondents.

Excluding the outlier member, only 13 members asked question-type posts, totaling 17 posts. Of the 13 “question-askers,” four asked two questions and nine asked only one question. In addition, of the 13 question-askers, four were frequent posters, posting at least 40 times during the six-month period. Seven posted less than 10 times in the same period.



FIGURE 2
Number of Posts by Members



Analysis of Frequent Posters

Frequent posters (20 posts or greater) posted 396 times; the majority of post types were replies (258), followed by opinions (102).²¹ Figure 3 displays the post types relative to total posts for these frequent posters. The number of replies per frequent poster averaged 23.45 ($\sigma = 11.63$), indicating that helpers are frequent (or routine) helpers. The number of opinions per frequent poster was lower, averaging 9.27 ($\sigma = 8.59$), indicating that frequent contributors were more likely to reply to a question or join a previous thread than to offer an unsolicited opinion.

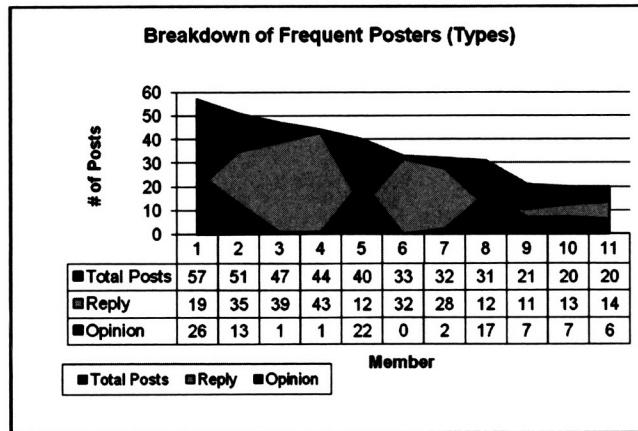
SUMMARY AND CONCLUSION

What do accounting academics discuss with colleagues around the globe? How do they find answers to previously unanswered technical questions? How do they feel about the Sarbanes-Oxley legislation? Where do they share experiences regarding the use of a new instructional tool? What methods do they use to teach accounting practice to students? Most importantly, where can I go to find out?

Answers to these questions lie in a long-lived electronic network of practice in accounting, namely the AECM. This study reports the results of analyses of archival data comprising actual posting behavior on the AECM. The study also includes perceptual data collected from ENOP members via a web-based survey. Archival results indicate that members use the network to post questions, replies, and opinions, covering a wide range of topics, but focusing primarily on financial accounting practice and education. Interestingly, despite its original intent of providing a forum for discussion of topics related to “computers and multimedia,” we find that the pattern of postings and topics discussed have resulted in a “morphing” of the ENOP from its original

²¹ We exclude the outlier from this analysis.

FIGURE 3
Breakdown of Frequent Posters (Types)



intended purpose. The proportion of postings pertaining to accounting systems and information technology was relatively small compared with the postings relating to financial accounting and auditing topics. It is also interesting to note that a significant percentage (38 percent) of posts related to business topics unrelated to accounting. Another remarkable finding emerging from the archival analysis of actual posts is that a single member contributed two-thirds of all postings. It is very likely that continued interest in the AECM is because, in large part, of participants' curiosity in this one member's postings.

We received survey responses from 69 members of the AECM, with a vast majority indicating that they read the ENOP at least once a week. Analyses of the survey responses regarding attitudes toward the ENOP yielded three factors that capture members' perceptions about why they participate: reputation, altruism, and commitment. The findings revealed that members are significantly committed to the ENOP, are significantly altruistic in their ENOP participation, and do not participate primarily to improve their reputation in the profession. Correlating perceptual responses to actual patterns of participation in the ENOP, we find that altruism is a significant predictor of posting frequency, suggesting that academics are natural teachers who share their knowledge willingly. Unlike prior studies, most notably Wasko and Faraj (2005), we do not find a relationship between reputation building and participation frequency, nor do we find that academics participate out of a sense of reciprocation. Although the lack of significant findings in this study may be a result of insufficient power, our findings provide some evidence that the Wasko and Faraj model of knowledge-sharing may need to be modified for application to contexts where reputation-seeking tendencies are not salient, as appears to be the case at least in accounting academia.

Accounting academics appear to participate without expectation of any returns, such as prestige. Although we do not find a significant positive relationship between posting frequency and commitment, the lack of finding could also be a result of our participation measure. Members who highly value the ENOP as a resource may demonstrate infrequent posting, because the nature of their posts are questions. The data reveal that it takes only a single question to generate a flurry of activity (see Appendix B for examples). Thus, members' commitment might not be evident in measures of posting frequency. Indeed, it is likely that many members remain committed to



AECM because of the serendipitous nature of communication it fosters. In what might be called the “coconut wireless system” of communication,²² a message from AECM could be forwarded probably multiple times to individuals who are not members of AECM. These recipients could then contact the member who forwarded the post and/or the original AECM poster out of interest in that member’s posting.

We collected qualitative data about participants’ experience with the ENOP. When we asked respondents to provide an example of how the AECM helped them, over half of the individuals recalled a specific instance. The AECM provided them with explicit information, such as journal names, conference dates, new software options, and definitions of new accounting terms. Members also found general teaching information and theory discussions useful in their work. On the other hand, when we asked respondents if the AECM ever hindered them in their work, only five members responded *yes*. Two said that it takes too much time to read the daily posts. The other three said they were distracted from work because the posts were so interesting. No other respondents indicated that the AECM was a hindrance.

Overall, AECM’s 12-year record of accomplishment supports the need for and usefulness of an accounting academic ENOP. We find that successful ENOPs change to meet the needs of their members. Because there is no authoritative oversight, member interests and posts determine the direction of the discussion. While this self-control feature might be ineffective in a general ENOP (ultimately leading to the ENOP’s demise), in an academic ENOP, this feature allows participants to openly explore unlimited topics. We demonstrated that participation rates in an academic ENOP are driven by altruism, and not by reciprocation or prestige seeking, as seen in prior knowledge-sharing studies. These findings have significant implications for AAA Commons—the professional networking site launched recently by the AAA. If the AAA properly publicizes AAA Commons to the population of accounting academics, the results of our study suggest a high likelihood that accounting faculty members will use the platform to share knowledge without expectations of reciprocation and not merely to seek prestige. In light of our finding that a few active participants drive the success of the AECM ENOP, it would seem appropriate for the AAA to seek out and encourage a few members in each functional area to serve as leaders who would be the initial participants in AAA Commons. Content added by these leaders is likely to foster participation by a broader audience of AAA members, thereby creating a mushrooming effect that heralds a successful ENOP. It is also worth noting that our study found that accounting academics are motivated primarily by altruism and not reputation-seeking tendencies. Accordingly, the addition of a rating feature that would allow members to rate postings along quality and helpfulness dimensions, while useful, may not drive members to join or post to AAA Commons.

There are some limitations to consider in interpreting the results of this study. Although we have no reason to believe that the first six months of 2006 were anomalous in any respect, we cannot be certain that the pattern of postings would be similar had we examined a different or larger window. Extracting the postings from the AECM archive and subsequently classifying them was an extremely time-consuming manual process that is almost certainly not error-free. The findings relating to the posting classifications should be interpreted with caution in light of the low degree of inter-coder agreement. Regarding the survey responses, while a 42.1 percent response rate is respectable given the length of the instrument, our study involved a relatively small sample size ($n = 69$). Despite the small sample size and low statistical power, however, the similarity between the three perceptual factors emerging from our analysis and those of Wasko and Faraj

²² We thank an anonymous reviewer for the “coconut wireless” suggestion.

(2005) is encouraging. We acknowledge, however, that the small sample size resulted in low statistical power, which is a possible reason for the lack of support for our research questions regarding reputation and commitment.

Future research could explain how individuals use the knowledge they receive from AECM and other sites. Our research explored this concept on the surface in the additional analysis. A deeper understanding of this topic could provide interesting and practical information. A different extension would be to explore the arena of the more recent ENOP variant, that is, professional networking sites such as Spoke (<http://spoke.com>), Ryze (<http://www.ryze.com/>), and LinkedIn (<http://www.linkedin.com>), which are a variation of social networking sites like Facebook and MySpace. What causes individuals to join such networks and what benefits do they derive from belonging? Given that web-based professional networks such as Spoke and Ryze are much richer and feature-laden relative to the sterile email-based ENOP technology, it would be worth investigating whether and to what extent these technologies displace existing ENOPs. Future research could further investigate the “coconut wireless system,” in particular the perceived benefits of such serendipitous communications and the extent to which they link directly or indirectly to ENOP activity. While the current research focuses on inter-organization electronic networks of practice, it would also be fruitful to explore the antecedents and consequences of the use of intra-organization knowledge-sharing networks enabled by technologies such as Lotus Notes.

APPENDIX A

ONLINE GROUPS AND COMPARISON OF AECM AND AAA COMMONS

Panel 1: Descriptions of Online Groups

Types of Online Groups	Format	Examples	Defining Features
LISTSERV	Communication via mass email made possible by an automated mailing list application.	AECM, Tomorrow’s Professor	Voluntary, unmoderated, email delivered automatically and almost instantly.
Internet Forum/ Bulletin Board	Web application for online discussions—members post comments on a limited, specific topic.	Microsoft Forums, Video Game Forums	Moderated, member must navigate to site to view. May allow members to rate comments.
Social Networking Site	Members create an identity, post information about themselves and unlimited topics.	Facebook, MySpace, Classmates	Public display of connections. Public and private messaging.
Combination Site	Combines features of the types listed above.	AAA Commons	

Panel 2: Comparison of AECM and AAA Commons

	AECM^a	AAA Commons^b
History	Established February 1994	Established August 2008
Membership	Free online registration: open to anyone with an email address.	Must be a dues-paying AAA member or invited by an AAA member.

(continued on next page)

Panel 2: Comparison of AECM and AAA Commons

	<u>AECM^a</u>	<u>AAA Commons^b</u>
Accessibility	Registered members may post by email and view archives.	Members have full access to all capabilities, invited members have limited access.
Leadership	Barry Rice—originator Robert Jensen—voluntary leader, accounting professor who is retired from formal position: posts daily, generates discussion, maintains a personal, companion website.	AAA has contacted “gardeners” and requested that they post information on the site.
Sponsorship/ Support	Independent, single server.	Established, designed, and funded by AAA and its members.
Technical Capabilities	Daily email posts and archive of posts.	Designated areas for posting various files, discussions, multimedia. email capability, private and public access options.
Anonymity	Posters: email address is disclosed Lurkers: anonymous	Members may create avatars to conceal identity. May add pictures and taglines to enhance identity.

^a AECM: <http://pacioli.loyola.edu/aecm/>

^b AAA Commons website: <https://commons.aaahq.org/signin>

AAA Commons Proposal: http://aaahq.org/about/AAAShareVisionDocumentJan08fnl_4_.pdf

APPENDIX B**SAMPLE EXCERPTS FROM AECM POSTINGS BETWEEN JANUARY AND JULY 2006****Example of RESEARCH question and answers**

4/27, 10:36am Initial Post: I am involved in a research project where we have a small number of responses from a large number of countries. I am attempting to establish categories into which I can place these countries for comparison purposes. The easy ones are North America, South America, Europe, etc. Does anyone have experience and/or suggestions? Thanks for your assistance.

4/27 11:47am Reply 1: You might want to take a look at the GLOBE Study referenced below: House, R.J.; P.J. Hanges; M. Javidan; P.W. Dorfman; and V. Gupta (Eds).

2004. *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies* (Thousand Oaks, CA: Sage Publications).

Good luck with your project.

4/27, 11:58am Reply 2: You might want to check out the following paper that I think would help quite a bit with the way you describe your data. (omitted name) and I used it as the basis in our '92 cross cultural auditing paper in *Advances in International Accounting* if you want an accounting usage cite to go with it.

4/27 12:24pm Reply 3: Multi Dimensional Analysis (typically used in marketing) is a technique used to cluster countries according to underlying criteria but I am not sure if your data is conducive to using it. You may want look into.

4/28 12:14pm Reply 4: Another obvious option no one has mentioned is to use Geert Hofstede's cultural dimensions. His line of research is not universally accepted but still has wide use in the literature. In cross-country studies, I've found it helpful in developing hypotheses that have generally panned out.

If you go to his website, www.geert-hofstede.com, he has scores on his cultural dimensions for about 75 countries as well as pretty handy explanations. You may find it useful. It works better for some things (ethical decision making, for example) than others (accounting standard convergence).

4/29 7:19am Reply 5: You may like to take a look at the following studies of grouping of nations:

Harmonization of the auditor's report

Jagdish S. Gangolly, Mohamed E. Hussein, Gim S. Seow and Kinsun Tama

The International Journal of Accounting

Volume 37, Issue 3, 2002, Pages 327–346

Hussein, M.E., Bavishi, V. and Gangolly, J.S., 1986. International

similarities and differences in the auditor's report. *Auditing: A Journal of Practice and Theory*, pp. 124–33.

Nair, R.D. and Frank, W.G., 1981. The harmonization of International

Accounting Standards, 1973–79. *International Journal of Accounting*, pp. 61–7.

Tay, J.S.W. and Parker, R.H., 1990. Measuring international harmonization and standardization. *Abacus*, pp. 71–8.

Example of TEACHING question and answers

5/1 5:30:40pm Initial Post: I am considering using ACL or IDEA in my auditing class for the fall. After brief discussions with the reps of each company (whom I might have misunderstood) this is my analysis:

ACL:

ACL will give us a free license to install a networked version of ACL allowing 20 concurrent users. The version is a full-version with no file size limitations. They DO NOT have individual licenses, meaning that the students could not have it on their home machines unless they bought a full-version (around \$2,000). (note some books package ACL with their text—but ACL claims that these are old unsupported versions of the software and that they discontinued that program years ago though the textbook publishers still package it with books).

Pros:

Full version allowing data-mining and complicated auditing scenarios I think ACL has greater market penetration—but not absolutely sure

Con:

All work must be done at laboratory

IDEA:

IDEA will give us software that can give us software that can be run on individual machines, but the software has size limitations and the

Pros:

Version of software can be made available to all students on their own machines

Cons:

Software must be individually installed on school network machines in laboratory. Installing on all laboratory machines could be very problematic. Putting the software on only a few machines in the laboratory could cause bottlenecks

To AECM:

- 1) Are there fallacies in my understanding?
- 2) Are there additional pros and cons?
- 3) Is there other generalized audit software out there that I should consider?

5/1 3:19pm Reply 1: We use ACL extensively in our auditing undergrad and Macc programs. We have the network license and allow access in the laboratories and through our Citrix server. Although we may have more than one exercise going at a given time with approx 100 students needing ACL, we have exceeded the 20 concurrent users only once or twice and the students get a message to try again in a few minutes. It's been one of our most successful applications.

And, we get full tech support from ACL for any problems that cannot be resolved by our network staff.

You might contact Al Ahrens about his experience with having the ACL CD included with the text. In my opinion, there are not huge differences between ACL 6 and the current 8.3 (or is it 4 now). The student experience would be very similar.

Hope that helps. We are very satisfied.

5/1 6:34pm Related Question from different poster:

Is there a reason you use citrix server? Is it for authentication/single signon? Or is it for SSL/VPN? Or is it used as an access infrastructure for cross-platform collaborations? Where is the value added, specially in a laboratory environment? I am puzzled.

We looked at Citrix a long time ago to ease pains of cross-platform collaboration (we use unix (solaris, linux, and MocOS) as well as windows) but pretty much gave it up. I was wondering.

5/2 8:29am Reply 2: Over the years I have switched between ACL and IDEA. I currently use IDEA in my teaching. A major factor is that students greatly value having the ability to work on their own computer. I do not think there are substantial differences between the products or that the file size restrictions is a major problem.

5/2 8:33am Reply 3 A small data set + manuals and practice questions comes with the ACL software. For some of our exercises, I copied the practice data set into Excel and added to it to make the exercise more significant. Fairly easy to do in Excel.

We also have asked our firm partners for permission to use some of their training data. That's usually data from an actual client where the sensitive or recognizable fields have been washed.

5/2 9:39am Reply 4 I teach a graduate IT Auditing course in which we use both ACL and IDEA.

Both are taught because both are used in the business world. We use the version of ACL that comes with Hall's IT Auditing book. IDEA sells the students a version and workbook for \$25 per student and gives us a free copy of the software and workbook. The students then load the software on their laptops and bring them to class. This turns any classroom into a laboratory. The students generally like IDEA better but still enjoy ACL. I hope this helps.

5/2 10:27am Reply 5: I use Auditing, Concepts for a Changing Environment (5th edition) by Rittenberg and Schwieger, published by Thompson South-Western, ISBN 0-324-22310-2.

This text comes packaged with ACL Student version 8. The text has a ACL tutorial and 3 cases, one on Fraud (using student grants at a university), one on Inventory and one on Accounts Receivable. There are also some end-of-chapter problems that require ACL.

The data files for the tutorial, the 3 cases and the end-of-chapter problems can be downloaded from the publisher's website: <http://rittenberg.swlearning.com> and by clicking "Student Resources" on the left. The data files are all in Excel. Hope this helps ...

5/2 11:17am Reply 6: I also would like to use either of these softwares in my auditing

courses. My question is where do we get the data or practice sets? If from publishers, which ones are good? I am mostly interested in a comprehensive database that allow analytical reviews as well as other auditing functions.

5/3 9:46am Reply 7: I use the databases supplied by ACL or IDEA. They are good enough for

students to see what the software can do. If you want to process larger or more sophisticated databases you need the actual software which is out of our reach. I spoke with our university auditors and they didn't want to become an ACL partner.

Example of ACADEMIC work-related comment and discussion

5/4 1:11pm Original Post:

Some Reasons Harvard University Does Not Require Student Evaluations

Student course evaluations are ubiquitous these days, whether they be at a national site like ratemyprofessors.com or sponsored by individual institutions. But Harvard University faculty members are split on whether evaluations should be mandatory ... Harvey C. Mansfield, a professor of government, reminded colleagues at the Tuesday meeting that there are plenty of pitfalls to evaluations. He said that evaluations promote "the rule of the less wise over the more wise ... on the assumption students know best." Mansfield called requiring evaluations an "intrusion on the sovereignty of the classroom," and said that evaluations "reward popular teachers at the expense of serious teachers ... popular teachers can be serious but many are not, and many teachers are serious but not popular." Mansfield added that he would like to hear more discussion of evaluations, and to see their role diminished rather than increased.

David Epstein, "One Size Doesn't Fit All," *Inside Higher Ed*, May 4, 2006

—<http://www.insidehighered.com/news/2006/05/04/harvard>

(name omitted) is opposed to student evaluations because of the studies showing that they lead to grade inflation—<http://www.trinity.edu/rjensen/assess.htm#GradeInflation>

5/5 12:37pm Reply: I am very much in favor of feedback from students. The problems with the evaluations as used in my institution is that (1) the way the questions were phrased and the strictly numeric responses gave no useful information to me regarding specific improvements that would have improved my teaching, and (2) I got a strong impression that their main purpose was to provide an easy (even if unreliable) way for administration to judge the quality of our teaching for purposes of merit, promotion and tenure.

One thing I discovered late in my career (I'm a slow learner) was that students above all wanted to know where they stood rather than necessarily getting a higher grade than they thought they deserved. One semester I made just one change: I kept a running total of assignment and test scores and grade-so-far on the network and each student could access his/her own record. My SEI score was a whole point higher (on a 5 point scale) than in the previous semester.

5/5 4:49pm Reply 2: I agree that numeric evaluations are next to useless. In order to get something that I can actually act on I ask students to complete a short narrative survey about half way through each semester. This is done on Blackboard so it's anonymous and pretty painless for them. I usually get about 2/3 of the students to actually do the survey. Then I use a part of the next class session to give the students a summary of what I received and what changes will be made in the rest of the semester. No matter how many times I do this there are always a couple of minor adjustments I can make in response to feedback and I think the students appreciate the fact that I actually make some changes even if they are small.

Also, for my fifth year Macc class, the students have to submit a series of about 20 very short (1–2 pages) papers on various topics throughout the semester. For one of the final papers I give

them the choice of giving me additional feedback on the class and suggestions for the future. Usually about 1/3 to 1/2 of the students take advantage of this choice and I get a number of very good ideas for future classes.

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