Information Technology in Value Shop Activities:
An Exploratory Study of Knowledge Reuse in Norwegian Police Investigations

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ABSTRACT

It has long been argued that knowledge reuse is positively related to the extent of information technology use in organizations. This article reports results from an exploratory survey of police investigation units in Norway to develop a research model linking knowledge reuse to IT use. Police investigation units are defined as value shops, where problems are solved in five primary activities.

Keywords: knowledge management; information systems; law enforcement; survey

INTRODUCTION

The extent to which information technology improves knowledge reuse in organizations has been discussed by many scholars, both theoretically (e.g., Chen & Edgington, 2005; Levina & Vaast, 2005) and empirically (e.g., Bock, Zmud & Kim, 2005; Garud & Kumaraswamy, 2005; Ko, Kirsch & King, 2005; Tanriverdi, 2005; Wasko & Faraj, 2005). Within the resource-based theory, the knowledge-based view of the organization argues that knowledge is the resource foundation for organizational performance and, ultimately, the primary driver of an organization’s value (Bock et al., 2005; Garud & Kumaraswamy, 2005).

Knowledge reuse has long been considered a problem in police investigations (e.g., Collier, Edwards & Shaw, 2004; Lahneman, 2004; Luen & Al-Hawamdeh, 2001). It is in applying information technology to strengthen weak ties in organizations, and thereby increase the breadth of knowledge reuse, that IT holds promise in law enforcement. According to scholars such as Chen, Schroeder, Hauck, Ridgeway, Atabakhsh, Gupta, et al. (2002) and Hughes and Jackson (2004), information technology has great potential in supporting knowledge work of police investigators.

This study assesses the impact of information technology use on knowledge reuse
activities in the context of police investigation units. The research question is as follows: *Is the extent of knowledge reuse in police investigation units influenced by the extent of information technology use?* The answer to this research question is developed by statistical results from a survey in which police detectives were asked to state their IT use in different primary activities of the value shop and how much knowledge reuse they do in their investigative work. This article is rooted in current practices in the police investigation field (e.g., Fahsing, Ask & Granhag, 2004; Gottschalk, 2007; Holgersson, 2005; Puonti, 2004).

This study applies the value configuration of the value shop to identify potential primary activities that contribute to knowledge reuse (Stabell & Fjeldstad, 1998). The value shop is a value configuration for knowledge work consisting of the five primary activities of initial crime scene assessment, assessment of incoming information, selecting appropriate lines of inquiry, case development, and post-charge case management (Smith & Flannagan, 2000).

**POLICE INVESTIGATIONS**

Investigation is the police activity concerned with (1) the apprehension of criminals by the gathering of evidence leading to their arrest, and (2) the collection and presentation of evidence and testimony for the purpose of obtaining convictions. An investigation is normally divided into two major areas of activity: (1) the preliminary investigation normally carried out by officers in the uniform patrol division, and (2) the follow-up investigation normally carried out by officers formally trained in investigative techniques, often part of a detective bureau (Thibault, Lynch & McBride, 1998).

Knowledge work in police investigations is based on a variety of information sources, such as incident reports, crime scene investigator reports, witness statements, suspect statements, tip lines, crime scene photographs and drawings, fingerprints, DNA, physical evidence (e.g., ballistics, tool marks, and blood spatters), informants, and property tracking.

Police investigators take both written and visual notes. Visual notes are simply the graphic equivalent of written notes. Taking visual notes refers to recording information, which is primarily visual and, therefore, could not be recorded effectively with words. Keeping notes has always been an effective hedge against an imperfect memory. Moreover, the act of taking notes, and selecting and sifting through them, is an important tool for creativity (Crowe & Laseau, 1984). Finally, notes are important as documentation of work in investigations.

An important task in most criminal investigations is profiling. Criminal profiling is concerned with the process of inferring distinctive personality characteristics of individuals responsible for committing criminal acts (Turvey, 1999). This process has also been referred to as behavioral profiling, crime-scene profiling, criminal-personality profiling, offender profiling, and psychological profiling.

The extrapolation of characteristics of criminals from information about their crimes, as an aid to police investigation, is the essence of profiling. Canter and Heritage (1990) propose that for such extrapolations to be more than educated guesses they must be based upon knowledge of (1) coherent consistencies in criminal behavior and (2) the relationship those behavioral consistencies have to aspects of an offender available to the police in an investigation. Coherent consistency is concerned with the behavior of offenders during a crime and having some comprehensible coherence to them.

Criminal profiling is a subcategory of criminal investigative analysis; a term that accounts for several of the services that may be performed by forensic behavioral specialists. These services are said to include indirect personality assessment, equivocal death analysis, trial strategy, and criminal profiling. The profiling community is made up of professionals and nonprofessionals from a variety of related and unrelated backgrounds (Turvey, 1999).

Information from witnesses is typically assigned great importance in criminal investigations. The important role of witness reports has spurred a great deal of research studying
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