

# STORYTELLING FOR PROFESSIONAL DEVELOPMENT IN A TECHNOLOGY-MEDIATED POLICE LEARNING ENVIRONMENT

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## Abstract

Educational technology is frequently used in professional development. E-learning platforms and computer-based training have found a place in current development pedagogies. This study examines the use of a technology-mediated learning environment for the professional development of police officers. Storytelling is a well-entrenched method to pass on experience to novice police officers. The marriage of storytelling with a police technology-mediated learning environment is an idea born of the desire to make these environments more engaging, while employing a learning method that has proven to be beneficial in police circles. A qualitative research methodology is used to examine this idea, and test for its use and application for the future.

**Keywords** - Storytelling, e-learning, police training, narrative, experiential learning.

## 1 INTRODUCTION

This research explored the efficacy and desirability of storytelling, as pedagogy within a police technology-mediated learning environment (TMLE). The study sought the perceptions and preferences of learners within this environment. A semi-structured interview research methodology was used. Officers had viewed a demonstration of the pedagogy as presented through an e-learning course prior to the interviews.

The research also attempted to gain some measure of the officers' perceptions of the effectiveness of storytelling in its engagement of the learner, and the retention of the content delivered. As a possible forward-looking direction, the study attempted to determine whether this delivery method would have use in assisting new officers acclimatize themselves within the policing culture. Consequently, the study was restricted to front-line police officers in their early years of training and development (one to three years service). The purpose of this was to examine a group that is still early in its development and cultural acclimatization phase, in the hopes of determining what appeals to this group in terms of e-learning instructional strategy. The desired attempt was to find out what this specific group prefers, and how this preference effects their knowledge acquisition as seen through their eyes.

The Police Service involved in this study is located in the Province of Ontario, Canada and is a mid-size service with approximately nine hundred sworn police officers. Ninety two officers met the criteria of having at least one and no more than three years of policing experience. All of this group perform front-line patrol functions. Front-line uniform patrol functions are functions wherein the officers work in police uniform, operating marked police vehicles on a rotating shift basis, responding to calls for service from the communities to which they are assigned.

Technology is used in the training of these officers, through the technology-mediated learning environment known as e-learning. E-learning is the system by which the Police Service distributes courses to its members through its on-line intranet network. Officers access these courses in their workplaces through computer terminals configured for this task, and records of the courses they have attempted and completed are automatically recorded by the system. The terminals provide keyboard,

mouse and viewing screens along with audio and video capabilities. Officers operate these terminals at a time convenient to them.

The literature supports the use of storytelling as a pedagogy for adult and children [5], and supports a finding that appealing to the affective domain of the learner enhances the learning experience [14]. It also supports the notion of vicarious experience being obtained through storytelling [1,2]. In the context of TMLEs, recent research supports a move to adapt TMLEs to learners' preferences [12] and currently the subject of interactive TMLEs is gaining the most interest within e-learning research [18].

Affects and emotions influence the impact of new knowledge on schema development. Cognitive appraisals of experience in combination with an affective/emotional valuation of the experiences result in the development of new schemes. These schemes can be viewed as collections of neurons distributed over the brain. These collections function and activate together [15]. Cognitive processes are integrated in the learning process with affects and emotions [3]. Emotions have their own schematic influence on mind and behaviour, interacting with perceptual and cognitive processes [8].

Memory is considered a key element in examining mind and behaviour in the field of cognitive psychology [6]. Memory is involved in all processing of experiences, and in the retention and use of newly acquired knowledge. Recent advances in the study of memory through the use of brain-imaging technologies have shown the impact of emotions on memory [6]. Memory and retrieval have both been shown to be boosted by emotions impacting on the learner [10].

## 2 THE STUDY

The focus of this research was an exploration of the effects of storytelling in a technology-mediated learning environment as perceived by front-line police officers during their early years of training and development. This exploration covered three main objectives and questions:

1. What effect does storytelling delivered through a technology-mediated learning environment have on the skills, knowledge and attitude (SKA) acquisition of new front-line police officers? (Effects on SKA acquisition).
2. What are the perceptions of new front-line police officers concerning the effectiveness of storytelling in the on-line environment? (Thoughts about effectiveness).
3. To what use do new front-line police officers employ technology-mediated oral traditions in their positions? (Employing stories for skills acquisition).

Ford [4] suggests that Police recruits entering the profession have a service orientation, and are in possession of values similar to those of the general population. During training, the recruits' values are modified through cynicism displayed by instructors in the police academies and during formal field training with coach officers. A coach officer is an experienced officer that guides the recruit during the first three to four months of the recruits' training period. The means by which the cynicism impacts the recruit is known as a 'war story' [4]. War-stories are stories passed on to recruits by instructors or coaches and are based on personal experiences.

The problems with these stories are that they can be vague, and leave themselves open to multiple and possible inaccurate interpretation [4]. While acknowledging their wide-spread usage, Ford [4] suggests that better use could be made of war-stories in order to ensure the proper values are passed on to new police recruits.

Parrish [13] argues that instructional design (ID) should embrace an aesthetic approach in order to better encourage learner motivation and participation. This aesthetic approach can be viewed as an appeal to the affective domain of the learner; the attempt to provide a heightened level of experience that engages the learner so that the learning experience does not become boring or routine [14].

An e-learning course was made available to the research participants prior to their interviews. This course utilizes a storytelling method to deliver content, presented in the form of three videos ranging in length from seven to twelve minutes, and is referred to as the storytelling course (SC) in this paper, in order to distinguish it from other methods of delivery. The videos were of Police Officers relating their experiences with projects and exercises relating to the training and usage

of problem-based learning practices. One officer told her story of her efforts to conduct a problem-solving initiative within her community while in her training period. Two officers together told their story together about their experiences with the patrol training officer program, a new recruit training program based on problem-based learning principles. One officer told his story about his team's effort to address a problem within his community, using the problem-solving practices he had been taught.

The storytelling course (SC) methodology for content delivery is distinct from previous methods used. The major differences between the traditional delivery method and the storytelling delivery method rest on how the content is presented. In the traditional method, content is presented through a lecture-style format, with descriptions, terminology and definitions delivered through text display. Often audio and video readings of this text accompany the text pages. The SC delivery is accomplished through the video relating of experiences. The traditional method presents content in a conceptual framework; storytelling presents the content in an applied context. As noted in the literature, there is support for the latter presentation as a more efficacious way of encouraging learning. Salinas [17], Parrish [14], and Paulus, Horvitz and Shi [16] all attest to this, and this research and the SC course was designed to examine this further.

A sample was selected from the group of newer officers, and the sample group was interviewed using a semi-structured approach. The interviews were conducted after the officers had an opportunity to review the SC. Thirteen officers were interviewed, of whom nine were male and four were female. All four female and seven of the male officers were under thirty years of age; two male officers were over thirty years of age. The interviews were conducted at the members' workplaces, using audio tape and digital recordings to capture the data. Data was transcribed and then analyzed through NVIVO8 data analysis software. Queries were conducted within NVIVO8 for the purposes of determining links between categories and for observing word usages by the participants. This process revealed six major themes and eighteen minor themes in response to the research questions.

### 3 FINDINGS

Figure 1 (below) demonstrates the six major themes that emerged in this study. The themes are arranged in a circular fashion connected by an arrow. This is done in order to suggest a complex, non-linear relationship between each major theme.



Figure 1: Six Major Themes Emergent from the Data

### **3.1 The environment of new front-line police officers**

This theme provided answers to research question number two (Thoughts about effectiveness). The officers described their working environment as fast-paced and fluid. They felt that they had little time to spend on lengthy e-learning courses, and were subject to interruptions during their viewing of these courses. Their comments about this were impacted by their previous experiences of e-learning courses which they called the click-method (CM) course. A CM course required them to read text pages presented on a computer screen, clicking from page to page as they finished the reading. Sometimes the text was accompanied by audio voice-over which read the content of the text page. Sometimes the text pages were interrupted by brief videos which reiterated the content in the text. Occasionally quizzes followed the reading of the text pages, as a summative evaluation of the officers' absorption of the content. These quizzes provided multiple choice or true/false responses. If the officer selected the wrong answer, he/she could then select another answer until the right answer was selected. Completion credit for the course was achieved upon selecting the right answer for all quiz questions.

These types of courses ranged in length from thirty minutes to two hours. All officers reported dissatisfaction with this type of course, and felt that the learning was minimal. After completing these courses, officers felt that they retained little or no information and that the value of this course type was very low. On the other hand, the SC style of course used the storytelling method, and was very well received by the officers. All felt that it was very effective for their learning and much more effective than the CM style of course. The effectiveness of this course was attributed to many factors including the environment of the officers.

In a fast-paced, interrupted environment, short courses that capture the attention of the officers were agreed to be an improvement over previous offerings, and well suited to the officers' needs. Officers recommended that the story length be shortened to five minutes. They reported that they perceived their ability to devote time to a course to be short, partially because of their environment and also as a result of the type of learner they are. They believe that officers are mostly 'Type A' in temperament, which by their description means that they are busy, on the run constantly, and the numerous interruptions in their environment result in them being constantly on the move.

In addition, the ebb and flow of their workday means that their most alert times occur when they are busiest in their policing tasks. As one officer put it:

Often the best time, when you are most awake, most alert, you're also the busiest. It's difficult to find an appropriate hour when you're at your most attentive and also able to actually give your full attention to the course.

Consequently, moving video of a short nature that puts the story across efficiently appeals to what they perceive to be their collective needs and wants, within their environment.

### **3.2 The connections and relations between officers and stories**

This theme also primarily addressed research question number two (Thoughts about effectiveness). The officers reported that storytelling permitted them to make connections with the storyteller and that their attention was increased as a result. They also reported increased attention when they felt the story was relevant to the work they do, and when they had interest in the topic of the story. This interest in the topic could be prior, in the sense that the officer was interested in this topic before viewing the video, or it could be driven by the teller themselves, in the sense that if the teller, being an experienced officer felt the topic was important, then the officer viewing and hearing it might be caused to feel the same way.

Seeing a fellow officer in a video presented through an on-line course automatically lent an air of credibility to the story and topic. Officers reported wanting to hear from someone who performs the same job as they do. It was their feeling that fellow officers can relate to their job, in effect being connected with the job and thereby having a higher level of credibility than someone outside the profession. This connection increases the attention of the officers hearing the story, as they both assume that the storyteller has information of value, and they assume that the storyteller has some particular expertise that they can incorporate for their own use.

Connection with the story topic was achieved through medium of the TMLE. The officers reported the medium created an environment in which they felt the storyteller was speaking directly to them, as if

they were engaged in a direct conversation. This direct connection helped them put the storyteller's message into context, as they were able to put themselves directly into the story as it was being told.

### **3.3 The affects of stories on learning**

This theme addressed both research question number one (Effects on SKA acquisition) and research question number two (Thoughts about effectiveness). Interest in the content of the stories, engagement with the stories, and the emotional impact of the stories were sub-topics covered within this theme. These findings support the contention that appealing to the affective domain of the learner engages the learner such that the learning experience does not become boring or routine [14].

Officers felt engaged by the stories, to the point of stating that they actually entered into the story, either taking the place of a character within it, or putting themselves in the shoes of the storyteller. Entering the story was further described as a form of hypnotism by one of the officers. This hypnotic effect stimulated him to engage with the content presented in the story, resulting in ongoing reflection in an interactive manner. For these officers the stories were interactive, although the course did not require any physical activity such as keystrokes or mouse clicks to be performed by them.

This engagement was enhanced by the emotions displayed by the storytellers. Facial expressions and other non-verbal cues were observed through the video delivery of the stories. Officers reported that observing displays of emotion served to capture their interest, and caused them to give their full attention to the storyteller. The sense of engagement reported is in line with the literature that indicates humans have a natural affinity for storytelling [7] and that course design using an aesthetic approach to appeal to the learners' wants will better encourage their interest [13].

### **3.4 Vicarious experiential learning through stories**

This theme provided answers to research question number three (Employing stories for skills acquisition). Officers reported that they make significant use of stories told to them, and that stories delivered in the technology-mediated learning environment of the SC acted upon them in the same fashion as stories told to them in a face to face environment. During their training period, officers are exposed to many stories delivered by their coach officers and other experienced officers. The stories shared during this training become an experience base for the new recruit, obtained vicariously from the coach officer. Having heard a story about a previous experience helped give the new recruit a sense of familiarity with the context of that experience and enabled a sense of comfort when the recruit found himself in a similar situation.

The findings support the contention that the content resonates with the learner's own prior experience [1] and that learners can gain experience vicariously through the experiences of the storyteller [9]. The officers reported this to be the case; they used the storytellers' experiences to augment their own, and integrated these vicariously-obtained experiences with their own as they developed.

Further mention was made of vicarious learning as a way to justify a course of action by an officer. Two participants made note that the experiences of other officers, once embedded in their memory, became a base upon which to conduct themselves. They critiqued stories prior to deciding whether to embed them, searching for workable solutions for problems they might encounter. The goal when hearing stories was to hear and weigh the outcomes on the basis of their workability, in order that the same approach could be used in any similar situations.

The critiquing of stories also occurs while the story is being told. It is done at the time the officer places themselves within the story, assuming a character role or taking the position of the storyteller themselves. As one officer put it:

I think that when someone is telling you the story, you put yourself in that situation. You picture in your mind, like, if I was there with you I maybe would have done this or that. The story runs through your head, and you put yourself into it and think about what you would do in the story as it is being told to you.

### **3.5 The recall of the content of the stories**

Research questions number one (Effects on SKA acquisition) and number two (Thoughts about effectiveness) were both addressed in this theme. Officers reported that the recall of content was directly related to the absorption of content. Absorption of content was dependent on the engagement of the officer in the presentation of it, and the officer's interest in the topic being presented. Absorption then is directly related to the affects on learning of the delivery method. The stories presented through the SC type of delivery engaged the officers and allowed them to observe and feel the emotion of the storyteller. This engagement resulted in the officers becoming interactive with the material, and permitted them to enter into the story, placing themselves into the shoes of the teller or another character in the story. This process had the effect of embedding the experience into the memory of the officers; absorption of the content was reportedly widespread and deep.

As absorption was deemed to be thorough, retention of the content was also reported to be high in relation to stories that had been heard throughout the training period of the officers. The officers made reference to stories that they had heard in classroom instruction prior to their field training. They also vividly recalled stories they heard during field training from their coach and other officers. The officers' reported impact of emotion on the retention and recall of these stories is supported by memory studies in cognitive psychology [6,10].

The retention ability permitted them to recall these stories at will, and play them back in their minds, in a visual fashion. The officers reported being visual learners, as a group, and reported that the stories played in their minds, as a movie did, even after a substantial period of time had elapsed. The effect of storytelling on SKA acquisition is quite strong, and the officers reported that they were well aware of this effectiveness and in fact used it to their advantage.

### **3.6 The usages of stories in policing**

This theme primarily addressed research question number three (Employing stories for skills acquisition). The officers reported that stories were used for teaching, learning, bonding, and particularly for the messaging of safety issues, which were comprised of physical, psychological and professional categories. Stories are also used to reduce fear during their training. Storytellers use stories about their mistakes in order to demonstrate to the recruit that mistakes can be survived and learned from.

Stories were reported as a way of sharing content, the content being the experiences of the officers telling them. The use of storytelling places the content into a context that the officers report being able to relate to. The officers see themselves reflected in the storyteller, when the storyteller is a fellow officer and shares similar experiences. The reflection that takes place as a result of this connection enables the officer to incorporate the experiences of the storyteller into their own practice, after performing a process of critique of the story and review of the officers' own experiences. The content of the stories then merges with the officers' own experience to become part of the routine working method of that officer.

## **4 OBSERVATIONS REGARDING THE FINDINGS**

The findings as reported covered the themes from the environment of the participants through the connections and usages of stories by this group, and considered the affects on learning and recall. Through this journey, a number of generalized observations can be made.

1. The environment of policing contains time constraints and demands on the officers that impact the amount of time officers can devote to e-learning courses.
2. Officers work in a fluid and high-paced environment, and their ability to devote attention to a task or a learning opportunity matches the quickly changing daily nature and requirements of their environment.
3. Technology-mediated learning meets some desires of officers in that it is available to them on a needs basis, consistent with their time and ability to receive it.
4. Officers want technology-mediated learning (TML) that is meaningful to them, and permits them to absorb, retain and use the experience and content messaged through TML.
5. Stories presented in a certain manner assist in meeting the requirements of engagement and interest and promote the retention of content.
6. Officers use stories in their learning, and hear stories in their job tasks on a daily basis.

- Officers want storytellers from their own ranks. They wish to hear the experiences of fellow practitioners.

## 5 LEARNING PROCESSES WITHIN THIS CONTEXT

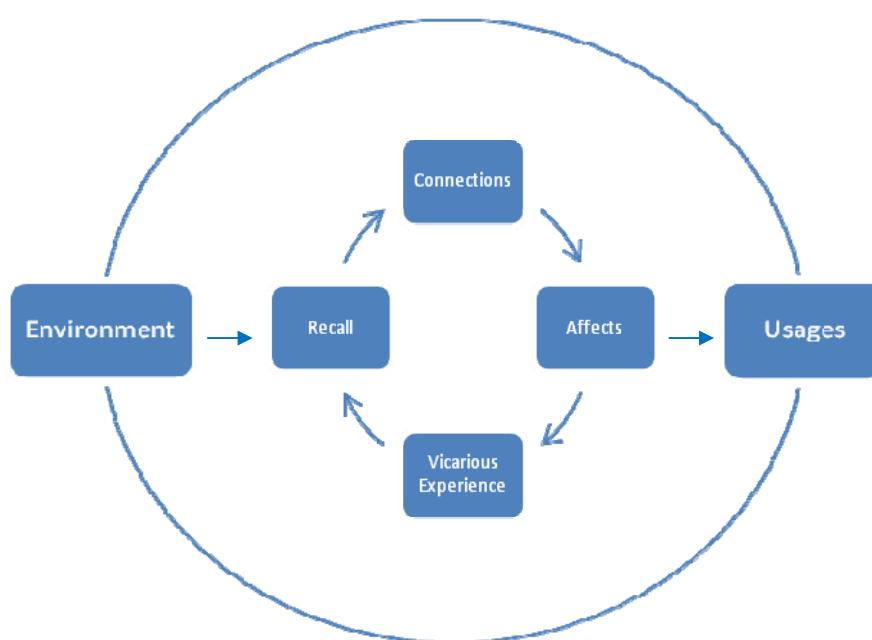
A learning process was observed to exist as described by the officers in their statements about how they learned through the use of stories. The learning process simply stated is that a mechanism exists when officers use stories in their practice as front-line police officers. This mechanism operates after the content of the story has been absorbed and retained by the officer and is based on that absorption being complete. It follows the basic learning cycle [11] process of:

trigger – connect – recall – synthesize – act

where trigger is an incident or event that the officer responds to, and connect is the connection of the context of that event with a similar context within the memory of the officer. The officer recalls hearing a story of the experience of another officer, the context of which is similar to the context in which the officer finds him/herself requiring a response. The officer in recalling the story synthesizes the content of it with the existing contextual content he/she is currently in and takes action.

Figure 2 (below) depicts the processes involved within and the relationships between the major themes found in this study. In the centre, four of the major themes are shown to be interactive with each other, in a complex non-linear relationship. These four themes interact with each other, in a manner similar to the basic learning cycle described earlier [11]. On either side of the centre are the major themes of environment and usages. The environment impacts on the centre, and the interaction in the centre impacts on the usages, in a linear fashion, as shown through arrows from the environment theme to the centre, and from the centre to the usages theme. The environment and usages themes themselves impact on each other, as displayed through their circular connection to each other. This circular connection shows a feedback type loop, depicting feedback from the usages of stories during events back to the environment of the officers, feeding the process again. The circular connection is also suggestive of a direct influence of the environment on the usages of the story content.

Viewing the local process as a system illustrates the linkages between the six major themes and the learning mechanism. This can be seen as a process of linking the environment of the officers with story content usage through the mechanism of a central learning cycle that utilizes storytelling.



**Figure 2: System process of the Six Major Themes**

## 6 CONCLUSIONS

This study points to the high value of stories as a teaching tool for professional development within policing and demonstrates that the affects of stories delivered through a technology-mediated learning environment (TMLE) mirror the affects of stories delivered through face to face contact. There are efficiencies and benefits through the former delivery system; the working environment of the officers is such that the constraint on their time requires a conciseness of learning and content delivery that can be well-addressed through a TMLE.

Storytelling can be thought of as a way of putting content into context. Through others' experiences, students experience the context of others and immerse themselves in the others' experiences, and thereby better understand the content through a resonance with the learner's own experiences [1]. A seemingly alternative perspective on this issue is put forth by Parrish [14]. He suggests that learning experience is never vicarious, which, at first glance appears to be in contradiction to Conle [1]. Both authors may be right, within their own contexts. Students may never be able to adopt another's learning experience directly as their own [14], but they may experience their own learning through a study of another's learning experience [9].

Perhaps the greatest benefit of the use of stories delivered through a Police TMLE lay in the control of the consistency of stories that can be delivered. In the face to face interaction, there is little or no control over what a newer officer is told; in the TMLE, stories can be picked and edited prior to delivery, in line with the organization's goals and mission. This benefit can serve to address the concerns of Ford [4] that perhaps the wrong stories are being told to recruit officers, and ensure that a highly desirable culture is being instilled in them from the onset of their careers.

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