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Assessing the Perceived Effectiveness of Cyber Crime Training

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Aims

To explore whether those who had undertaken cyber training since 2014 had preferences for different forms of training delivery

To understand the extent to which some forms of training were seen to be a better use of officer time

To understand the extent to which some forms of training were viewed as a more effective means of delivering particular content than others

To investigate the best ways of delivering refresher training

Existing literature highlights...

Police training and education is an area of perennial interest (Bryant et al)

Police training needs to be delivered in a variety of ways and needs content to be evidence-based rather than drawn from 'received wisdom' (Griffith, 2015)

Problems arise because we do not have enough information in this area (Mastrofski, 2007)

Successful investigations rely on skilled staff and good quality training (Marcum et al, 2010)

Existing literature highlights...(cont.)

The growing prevalence of cybercrime has led to increased concerns about front line officers having the necessary skills and confidence to respond appropriately to cyber incidents (Holt and Bossler, 2012)

Cybercrime awareness and investigation skills needed to be embedded within local police officers (Police Executive Research Forum, 2014)

E-learning delivery should not be viewed as a means of producing cut price training and that it needs to be underpinned by technological and pedagogic expertise (Monett and Elkina, 2015)

Methodology

Mixed Methods

- 1) Survey to gather a mixture of qualitative and quantitative data
- 2) Semi-structured interviews to contextualise the survey data

Survey Sample

Circa. 600 officers

Semi-Structured Interviews

Ex-trainer and an officer with Strategic Oversight of Training

Findings - Survey - Quantitative (1)

The questionnaire has a high reliability. It means that participants' scores across the 7 measures of perceived effectiveness are consistent with the overall aim in comparing the existing formal cyber training style in WYP.

Two research questions for quantitative study:

What do the 7 measures of perceived effectiveness in each training style tell us?

Is there a training style preferred by the participants?

Findings - Survey - Quantitative (2)

Participants scored considerably less for 'Online format was appropriate' (M =2.94, SD = 1.140) than 'Face to face format was appropriate' (M = 4.60, SD = 0.629), a statistically significant decrease in average score of 1.66 on a scale of 1 to 5, 95% CI [-1.97, -. -1.33], $t(66) = -10.26$, $p < .001$, $d = 1.66$ (Large effect).

We can conclude that overall participant' perception between Online and Face to face training style differ significantly in all of the 7 measures of perceived effectiveness of a training style.

Participants' overall score for Face to face cyber training (M =30.72, SD = 4.811) is considerably higher than Online cyber training style (M =22.36, SD =5.275), a statistically significant higher mean of 8.36, 95% CI [6.673, 10.047], $t(49) =9.956$, $p < .001$, $d =1.4$ (Large effect)

The quantitative results strongly suggest that participants preferred Face to face training style to Online and Workshop training style in terms of every one of the individual measures, and also in terms of the total score comparison. The quantitative data did not indicate any situation where Online or Workshop was more effective than Face to face.

Findings - Survey - Qualitative (1)

Online learning was viewed as accessible and unconstrained in terms of pace of learning. Likewise, it cut down on logistical issues of attending a training event at somewhere other than a member of staff's regular workplace. However, it was viewed as not encouraging a particularly deep level of learning, as being limited due to the lack of interaction and not appropriate for complex subjects. It was viewed as appropriate for basic or refresher training, or as a learning stage to be delivered prior to attendance on a classroom-based session.

Findings - Survey - Qualitative (2)

Face to Face learning was viewed very positively due to the interactive elements of it. The presence of skilled and knowledgeable trainers was valued by those attending sessions and the ability to seek clarification on complex issues was perceived very positively. Likewise, the group nature of such events allowed for learning and clarification through the sharing of experiences with other participants. A significant proportion felt that this mode of delivery was appropriate for all training with more nuanced responses identifying its particular strengths in relation to complex subject areas (such as cyber) and those with a practical element.

Findings - Survey - Qualitative (3)

Respondents asked to identify the characteristics of their ideal training session suggested that it would be face to face, involve a classroom environment and have relevance to practice. They also suggested that a combination of online and face to face training could work well.

Findings - Semi-Structured Interviews

Modes of Delivery

Resources

Strategic Positioning of Cybercrime

Key Themes of Discussion

Evidenced Knowledge and Experiential Knowledge

Quality

Resources

Positioning of Knowledge within the Organisation

Online Learning

Pace of Technological Change

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