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Current Practices of Design, Delivery and Maintenance of Online

Training for Transportation Professionals at Public Agencies

Sababa Islam, M.SC. Student and Mashrur Chowdhury, Ph.D., P.E.



Introduction

Why online training?

In order to make the transportation professionals effective in their job, different public agencies offer online trainings along with the traditional instructor-led courses. These online capacity building courses augment contemporary knowledge and technical skills of professionals to perform their tasks proficiently.

What are the advantages of online training over the traditional instructor-led training?

- Flexibility in schedule and training location (1).
- Provide cost-effective solution when the class size is large (2).
- Trainings contents are available to participants 24/7

Objective of the Study

The objective of this study is to explore the current practices of design, delivery and maintenance of online trainings by different state DOTs.

Methods

Phase 1: Review of Published Literature and On-line Training Products

- Review of publications from educational institutions, professional organizations, federal agencies and individual state transportation agencies is performed.
- Review of accessible online training modules of several state DOTs is performed.

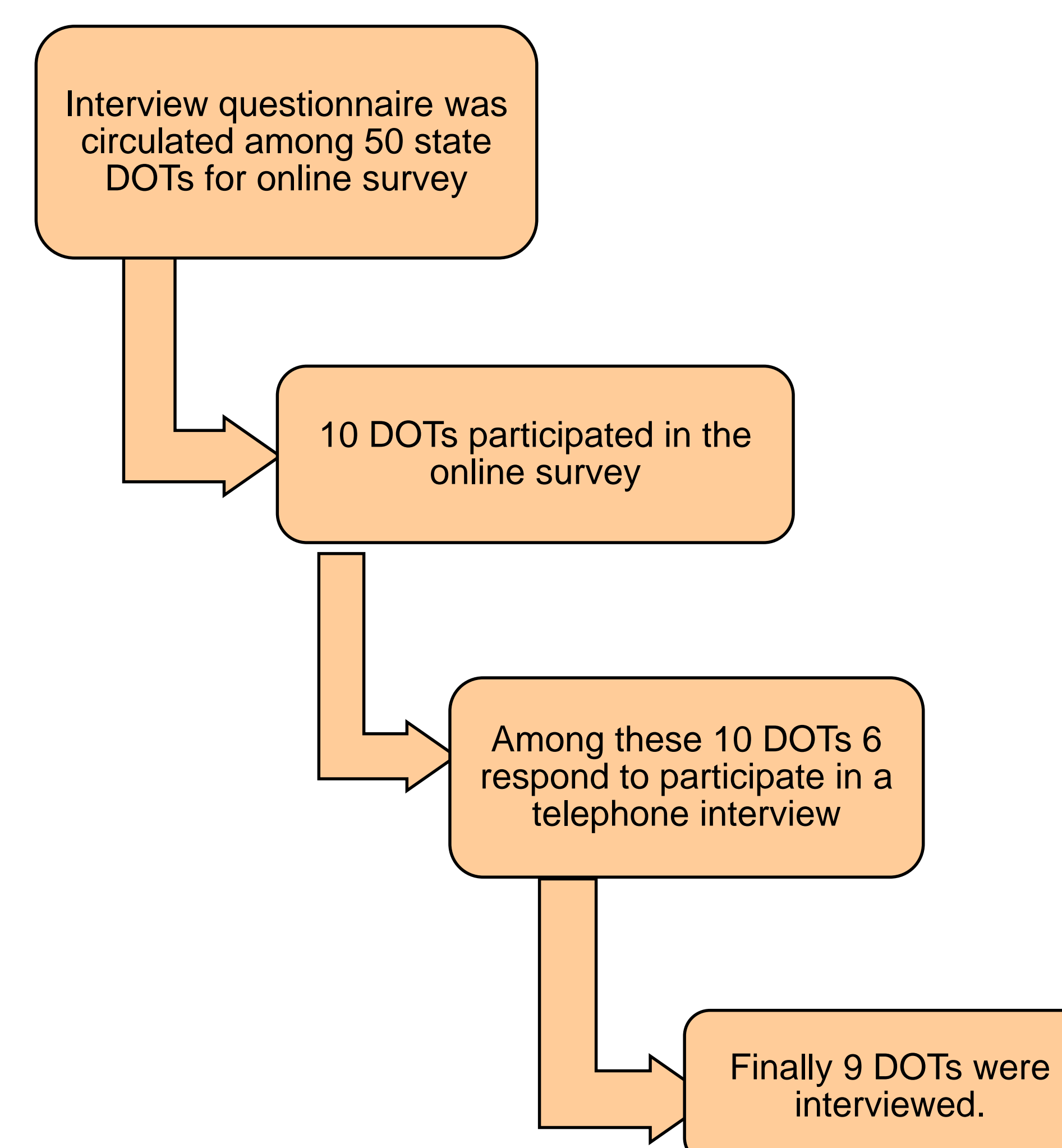
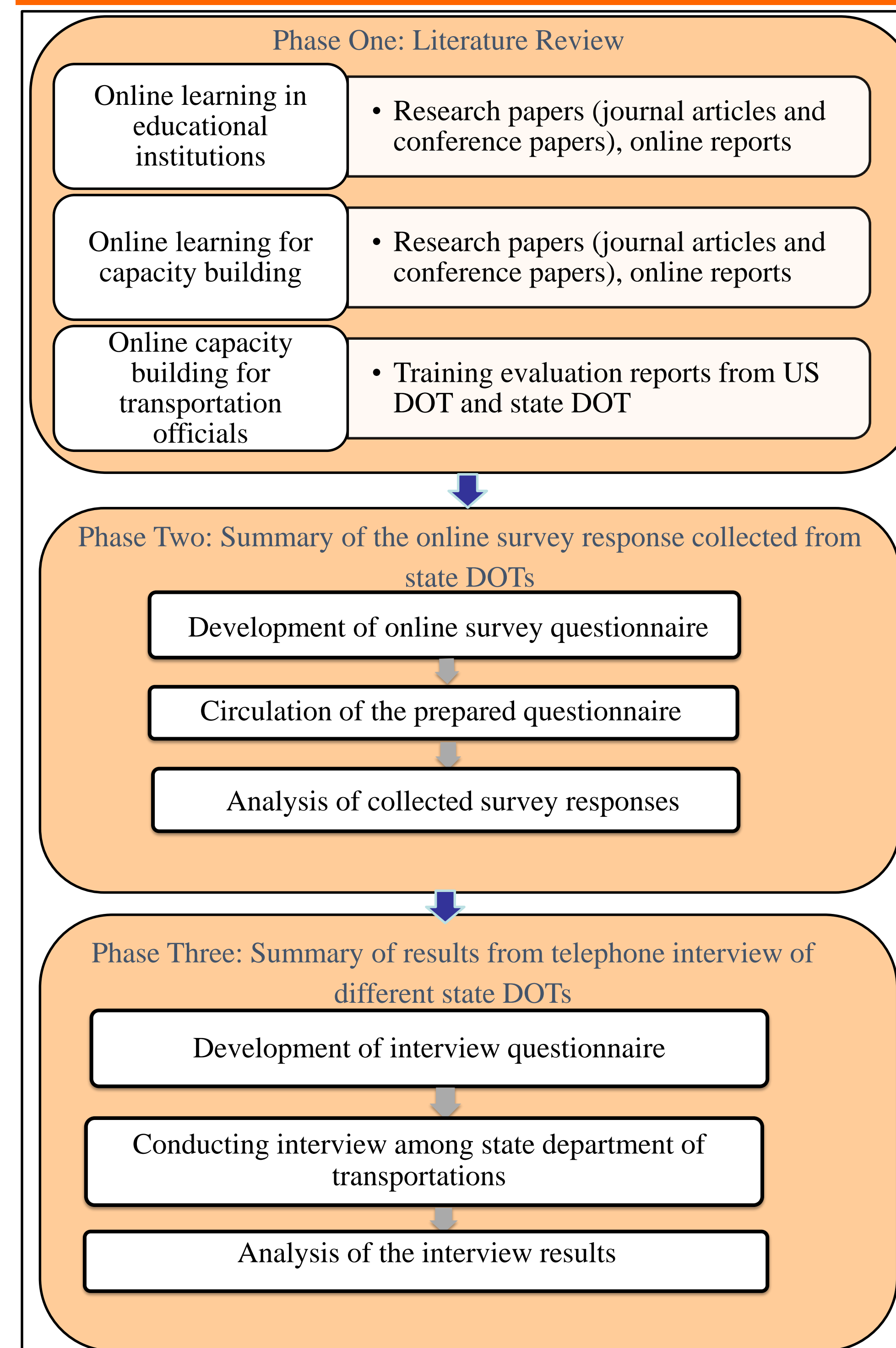
Phase 2: Summary of the online survey response collected from state DOTs

- An online survey is designed using the software tool, and it is circulated to state DOTs in all fifty states in the US.
- Participants are asked questions about their statewide on-demand online training trends, issues, management, strategies, and policies.
- Among these 50 state DOTs 10 respond to the survey.
- The collected responses from the survey are analyzed and summarized.

Phase 3: Summary of the telephone interview results from state DOTs

- Participants of the online survey are invited to participate in a telephone interview to investigate in detail about the design and delivery of the online training they develop.
- Among the 10 DOTs, 6 agreed to participate in the interview.
- Additionally 3 more DOTs have participated in the telephone interview.
- These DOTs have answered the questions regarding the online training they provide for capacity building their employees.
- Finally, the summary of the analyzed and summarized.

Study Method



Summary of Findings

• Are DOTs moving towards online training?

Yes, more than 80% of participant DOTs have online training and others are moving towards it..

• How they are encouraging participants for online training?

Proving compulsory online trainings and certification through it.

• Do they that in-house capability to develop online training?

Yes, majority of the interviewees have in-house capability to build online training.

• What is the most effective strategy for developing online training?

Interactivity is the key of successful online training. online training should be consisted of video snippets, audio visuals, games and animations to keep the participants engaged.

• What is the most widely used delivery platform for online training?

Adobe Captivate and Articulate, because of its flexibility and ease of use. Adobe Flash, Adobe Photoshop, Adobe Connect and YouTube.

• What should be the optimum duration of each training module?

Study results show that training modules of 15-30 minutes duration is best to keep a training participant attentive.

• Should online training be made available through mobile apps or tablets?

The state DOTs are still struggling to find answer to it as online training is still a new concept, more research is needed for this.

• How the DOTs are managing the multi-generation employees?

A strong majority of the interviewees mentioned their plan is to provide training in both instructor-led and online form, so individual can chose one of them.

• How to maintain online training most effectively?

Training modules should be updates once in a year.

• How DOTs are measuring the performance of the participants?

All the DOTs provide quiz at the end of each training module to measure the performance of the participants.

Conclusions

A lot of research has been accomplished for designing and developing online training, but unfortunately a very limited amount of research has been taken place for effectively designing online for employees of public agencies. This research is a unique one as it combined the results from literature review, online survey and telephone interview to provide a complete scenario of current practice on online training among different state DOTs. The results from this research will not only motivate the DOTs who are currently lagging behind to actively incorporate online training for building capability of their employees but also guide them to adapt the successful design considerations practiced by other pioneer state DOTs.

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