

digital frontier

The Training Technology Newsletter



Autumn Edition

Release Two

Welcome to digital frontier

The Training Technology Newsletter

01. // Martin at NORDEFECO



On behalf of NZDF and the Defence College I recently had the opportunity to travel to Halmstad in Sweden to attend the Advanced Distributed Learning (ADL) Directors' Meeting and the Nordic Defence Cooperation (NORDEFECO) Conference.

Due to flight delays departing Auckland I missed a connection in Dubai resulting in an epic 43 hour journey to Sweden via Dubai, Istanbul and Copenhagen (and it was my birthday!). I would have missed the ADL Directors' meeting however the Swedish Armed Forces team kindly offered to collect me from Copenhagen in Denmark for the two hour drive to Halmstad in Sweden.

At the Directors' Meeting there were attendees from USA, Finland, Norway, Sweden, Denmark, Serbia, NATO Allied Command Transformation (ACT) and invitees from the Regional ADL Initiative (RADLI). Each ADL Director gave a 20 minute presentation and overview of key strategies and challenges regarding distributed learning within their Defence Force.

I met with the Training Technology team from the Royal Danish Defence College (RDDC) - MAJ Michael Thorsen and WO2 Allan Ostergren, to explore common issues around the development of e-learning content. Of interest the RDDC commenced a Defence wide roll-out requiring all courses to include some online learning. To manage this massive task their TT team developed training in on-line andragogy (adult learning) and e-learning production skills and embedded this in their equivalent of the NZDF Foundation Instructors Course (FIC).

The NORDEFECO Conference itself was a mix of international keynote speakers and plenary sessions over three days with a focus on the alignment of technology and learning theory. While many Defence forces have invested heavily in modelling, simulation and e-learning systems the underpinning need for

excellent instruction has not diminished. The challenge is how to upskill instructors who have developed their subject matter expertise in a predominantly face-to-face learning environment?

The other major area of focus at the conference was the emergence of 'Big Data' and Learning Analytics. These systems and processes enable tracking and reporting of learning 'experiences' and learner competencies. Advances in this area hold great potential to transform learning across NZDF, i.e. if we can examine in detail the learning that takes place, then in turn we can improve Analysis, Design and Development of subsequent learning materials and courses.

As we get closer to the roll out of new and powerful technologies linked to our LMS it will be critical that NZDF personnel remain aware of how learning will change too. My personal reflection is that in the near future we may require specialists such as data scientists, learning analysts and advice from academia to make best use of these new learning technologies.

The reason I have a passion for training and education is that it never remains static and the current issues are a clear example of the advances in technology driving change in how we learn. Exciting times ahead!

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02. // NZATD Showcase

The New Zealand Association for Training and Development (NZATD) held a regional E-Learning Showcase at the Jubilee Hall in Parnell, Auckland on 16 May 2017. There were approximately 250 attendees.

The E-Learning Showcase was an opportunity for the TT team to attend an NZATD event to benchmark their e-learning development activities and network with industry professionals. Showcase presenters included; Fonterra, Fisher & Paykel Healthcare, Waitemata District Health Board, Burger Fuel, NZ Post, AA Insurance, BNZ and NZ Blood. Digital Training Media Producer (DTMP) Mr Frazer Gregory and Team Leader Training Technology (TLTT) Mr Martin Boulton co-presented an overview of RNZN Divisional Management Course (DMC).

The DMC e-learning course stood out among the presentations for its innovative use of narrative to sustain learner engagement, challenging use of software conventions and high standard of visual appearance. The day provided a wide variety of e-learning course material to view. Innovation in development and lessons learned from each organisation were discussed after each presentation.

Key outcomes included:

- + Storytelling and use of narrative remains a key driver in industry best practice
- + Interactive video micro-video and micro learning are becoming increasingly popular and proven as effective delivery methods.
- + Cloud-based software applications are becoming the norm and are also enabling content sharing and SME review opportunities.
- + Virtual Reality (VR) and Augmented Reality (AR), 360 camera technologies are emergent trends and may well feature heavily in future e-learning development.

"It was highly reassuring that the work TT is undertaking to deliver e-learning to NZDF personnel aligns closely with best practices, tools and content from industry presented at the Showcase."



Frazer | Martin





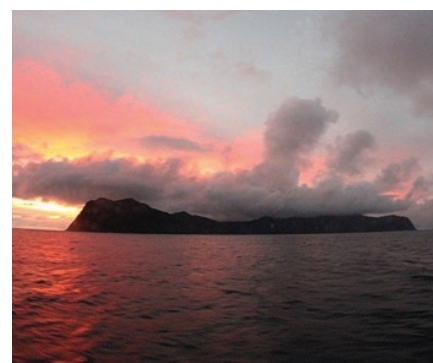
“The horizon never stops moving in all kinds of ways, weather changes by the second and wind is usually quite strong and prone to quick shifts.”

At first I was excited at the prospect of travelling to a remote place far out to sea but it would be a challenge both on me and my family especially when we have baby on the way. I guess we experienced a toned-down version of what sailors and their families go through whenever they go to sea.

Filming on a moving ship deck was interesting to say the least. The horizon never stops moving in all kinds of ways, weather changes by the second and wind is usually quite strong and prone to quick shifts. I had no control over lighting, let alone choosing where I could film from because of flight deck safety. When the Sea Sprite was landing or taking off there were lots of factors to be aware of, aside from the obvious dangers of being near a helicopter that is flying in and out of a moving ship, I had to be cautious of sea spray and water from the down draft getting into the camera gear. It was an uphill battle trying to get shots I wanted, but thankfully there were many

flights over several days so I had more than one chance to get the best footage possible. Overall I have gained a better understanding of what my job is about. It was a very valuable experience for me because I got a taste of what my viewers (our sailors, soldiers and airmen) do on operations, the environment that they work and live in and the challenges they face on a daily basis.

My thanks to CPOET Jamie Hawke for organising the opportunity, OMT(L) Robbie Jackson for assisting me with filming operations and the Commander and crew of HMNZS Canterbury for making me welcome and keeping me safe.



df *Jammi*

03. // TVP Experience on HMNZS Canterbury



After six years working as a civilian videographer for NZDF, I finally had an opportunity to go to sea on a filming mission. I was tasked with filming footage to support the RNZN Flight Deck Officers course.

HMNZS Canterbury was deploying on Operation Havre and the Sea Sprite helicopter would be used during their mission to provision DOC facilities and staff on Raoul Island.

Let's Talk Feedback



If we want our learners to engage with e-learning content and stop guessing at the answers just to complete the course, we need to consider how we are providing meaningful feedback.

04. // Six Ways to Provide Meaningful Feedback in Online Learning

1. Give explanations.

Learners don't gain much from the typical 'correct' or 'incorrect' response they receive from most e-learning quiz questions; they need to understand why the answer they gave was right or wrong. Give your feedback in the form of an explanation, or give learners opportunities to read further to deepen their understanding of a topic. Offer links to relevant resources to help fill the gaps or redirect them to precisely the piece of information they were missing.

2. Use stories and examples in your feedback.

Try replacing a simple 'right' or 'wrong' response with a personal story or scenario. Because information becomes more memorable when you combine it with emotion, the use of story based content is far more likely to stick than just providing information by itself. Use of a character or an avatar can add depth and authenticity to a story and demonstrate the point you are trying to make.

3. Replace quiz questions with a relevant activity.

Ask learners to complete an activity that is relevant to their particular context. This could be in the form of a work related task. You might consider setting up a scenario in which the learner must advise a character about the best way to proceed, or work out which steps they need to complete a particular process. Whatever type of activity you use, make sure it has a realistic context giving the learner the opportunity to practice their new skills in an authentic environment.

4. Use self-assessment as a form of feedback.

Part of gaining a deep understanding of a subject, is being able to reflect on your own knowledge and assess where your strengths and weaknesses lie. Rather than using quizzes to assess understanding or knowledge, consider asking learners to evaluate their own performance through self-assessment. Get them to identify their own strengths and weaknesses and then give them the opportunity to seek out information to fill the gaps. You might provide this information on other pages of the course, through included resources or via links to external documents or videos.

5. Provide choices, show consequences.

By giving your learners choices, you can also personalise the learner experience, curating content so that the individual learner is only exposed to that which is relevant to them. Provide feedback by showing the impact of a decision or an action made by the learner. This is a more authentic and memorable learning experience because the learner can see the relevance of the information or skills they are learning by being shown the consequences of what they do, or do not do.

6. Use a blended approach.

E-learning doesn't have to happen in isolation. Consider embedding e-learning modules into face to face courses and use the online content as a platform for discussion. Using e-learning as a way of getting learners to become really familiar with a situation or scenario can be a way to use classroom time more effectively to focus on the collaborative or discursive elements of the learning. Feedback is then given by the learners' peers and classroom instructor when they attend the face to face portion of the learning.

Philippa **df**

Let's Talk Microlearning

Microlearning is a method of delivering content in a very short and focused way.

05.// Let's Talk E-learning #1 Microlearning

While microlearning is not a new concept we are seeing an increased focus on delivering digital content as microlearning. But what exactly does it mean; and what are the benefits?

Microlearning is a method of delivering content in a very short and focused way (3-5 mins or less). Typically microlearning targets a single Learning Outcome (LO). It can be found in both formal (classroom) and informal (just-in-time, on-job) learning environments. It is learner-centric and usually delivered in rich media formats such as video or highly interactive content e.g. a short video on how to don the new NZDF OPFD (lifejacket).



Benefits of Microlearning

There are advantages to microlearning for both the learner and the organisation.

Learner Benefits

1. Learner Centric.

Control of learning is given to the learner, allowing for a more personalised learning path.

2. Just-in-time.

Microlearning should be available at the moment of learning need.

3. Accessible.

Available on multiple devices e.g. online, mobile, tablet.

4. Rich Media.

Highly engaging content leads to better retention of knowledge.

5. Less time consuming.

Appeals to modern learners and digital natives.



Organisational Benefits

1. Affordable and Agile.

Generally lower costs than traditional e-learning.

2. Shorter development cycle.

Due to run length and typical formats used Development and deployment is also quicker.

3. Easy to update.

The smaller focused content can be updated and corrected quickly.

4. Wider application.

Usable formally and informally, as standalone learning aids or as part of a larger course.

5. High Impact.

Targeting a single learning outcome enhances learner retention and is effective in promoting behavioural change.



James

06.// New Mars-L Rifle Development of Training Assets

Evan Floyd is the longest serving member of the NZDC's Training Technology team, based in Devonport. He specialises in multimedia, 3D and interactive Learning Aids. DF caught up with Evan to ask about how his latest project for the new MARS-L Rifle evolved....

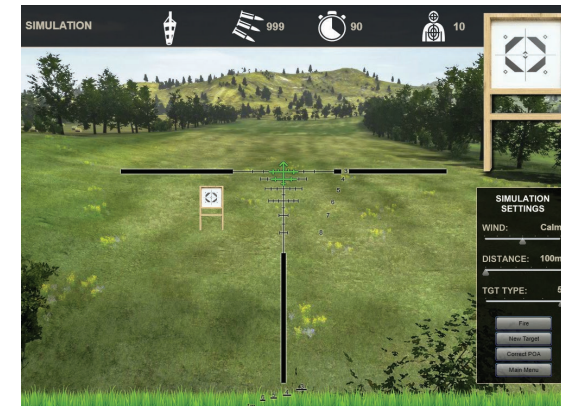
The MARS-L project was part of the Introduction Into Service (IIS) for the new NZDF small arms. Once the Project Initiation Document (PID) was approved and the job landed on my desk, I contacted the SME from the TIST team and obtained as much technical information as I could to start creating content. The SME provided specifications and images from the resources he had on-hand, well before the new weapon was due to be released across the Services.

On his IIS travels demonstrating the new weapon around various bases, the SME visited Devonport and our team took the opportunity to capture high quality footage of the weapon in various actions such as strip and assemble drills.

Most of the Training Technology team were involved in some way. We designed a theme, created posters and an instructional video for the Mars-L Rifle. The optical sight (ACOG) soon became a key element of the learning package, more so than the rifle itself.

"We started developing and coding interactive software for an innovative, gamified approach to learning the ACOG."

The ACOG Learning Aid allows personnel to select and shoot stationary or moving targets, learn how to use the various range finding lines, and of most value, get instant feedback as to how much a round veers off target based on distance and wind conditions. Such immediate feedback would be difficult to see on the firing range. The desktop application allows you to practice as often as you like, competing against the clock to improve your score.



"The ACOG Learning Aid has been well received and there has been a recent expression of interest from the Australian Defence Force to develop one adapted for them."

df
Evan



07.// DTMP Akhil Warrier Becoming a DTMP/DUSS Project ↙



Hi, I am Akhil Warrier and have recently joined NZDF and the TT team as a Digital Training Media Producer (DTMP) at Devonport Naval Base. Prior to joining the Defence College I worked as a multimedia tutor with YOOBEE School of Design in Wellington.

Since joining in Jan 2017, I have thoroughly enjoyed my induction experience and it was very evident that the TT team had put heaps of effort into the induction process. It was very systematic and gave me a good overview of Defence culture. I was flown down to RNZAF Base Woodbourne to meet with rest of the TT team and everyone at the WBN was very warm and welcoming. While being given an orientation tour of Ground Training I had a wonderful opportunity to try out the Avionics Systems Trainer to take a simulated flight between Woodbourne and Wellington as well as trying a pilot's helmet for size!

Back in Devonport, my first e-learning project with TT was working with RNZN Dive School to help develop some digital learning aids for their Diver Underwater Search System (DUSS). DUSS is designed to give a diver eyes in

waters too murky to see, for guidance in the dark without lights, for locating distant objects or targets, identifying them and for mapping search patterns or a route to easily relocate them.

DUSS has been a really interesting project. It involved understanding the DUSS equipment and software used and how the instructor will introduce this to the learners (Ordinary Divers). The SME for this project, Leading Diver Darren Shea has been very helpful and gave me the opportunity to use the DUSS device on land and in shallow waters of Narrow Neck beach. I will be collaborating with TVP Mr Sammi Kim to embed some short instructional video into the e-learning package.

To sum up my experience so far with NZDC; it's been fun and engaging with the chance to collaborate on exciting projects.



08.// TVP Aaron Falvey ↙ Lead Investigator Project



I've been working for the NZDF for the past 11 years doing video production work and the last six years I have been part of the Training Technology team within NZDC. As a TVP I work with

moving image to create learning aids which is something I enjoy. We do everything from writing, storyboarding, filming, editing and publication into a learning environment.

Recently, I have completed some video learning aids for the NZDF Lead Investigators Course with the aim to communicate the correct procedure for running an investigation. I was asked to produce a series of eight video scenarios, each leading to an 'incident'.

I filmed from a first-person perspective to help the viewer feel like they were watching these scenarios through their own eyes. The incident videos set the scene for students to act as a witness and use the information they saw in the video to inform their interview responses.

The feedback on the learning aids has been incredible with instructors noting that students had easily assimilated what they saw in the videos and put this into practice. During the assessment phase of the course, there were noticeable improvements in the amount of data that the interviewer was able to get from the witness, with the overall results being more consistent than had been achieved on previous F2F iterations of the course.

When working on video projects with the NZDF I have noticed that my overall confidence has grown, not just in giving direction during video shoots but in working with SMEs and Instructors.



09.// R2 Article Links ↙

Relating to our article **Martin at NORDEFCO** on Page 2.

Here are some follow up links for you to take a look at: (click them to open)

- ▶ www.adlnet.gov
- ▶ www.nordicadl.com

Relating to our article **6 Ways to Provide Meaningful Feedback in Online Learning** on Page 5.

Here are some follow up links for you to take a look at: (click them to open)

- ▶ **Nick Shackleton Jones' Affective Context Model.**
- ▶ **Storytelling for e-learning.**

Relating to our article **Let's Talk E-learning #1 - Microlearning** on Page 6.

Here are some follow up links for you to take a look at: (click them to open)

- ▶ **Five Examples of Microlearning Based Training.**
- ▶ **Ten Benefits of Microlearning Based Training.**

For more information about Training Technology or to watch our profile video please visit:

- ▶ **NZDC - Training Technology**
- ▶ **Email Training Technology**



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