How Digital Transformation Is Disrupting Learning
Speakers

Brandon Carson
Director of Learning, Delta Air Lines
Author of “Learning in the Age of Immediacy”

Shelley Osborne
Head of L&D, Udemy
Agenda

1. Digital technologies disrupting L&D

2. Real-life case examples

3. Q&A
Digital technologies transforming L&D in 2019
Artificial intelligence and machine learning drive personalization and context

- AI and machine learning can contextualize content for learners by providing recommendations based on user behavior

31%

Organizations that plan to add artificial intelligence, machine learning, and algorithms to personalize learning in the next few years

Source: Udemy Data
Virtual reality and augmented reality offer blended learning experiences

- AR provides contextual learning
- VR tech is more mature than AR
- L&D must master designing user experiences

18% Organizations that plan to incorporate virtual reality in the next few years
14% Organizations that plan to add augmented reality in the next few years

Source: Udemy Data
Online social tools foster a learning culture

- Crowdsourcing employees to curate info in real time
- New manager cohorts support each other on social media
- Empower employees to rate, review & share learning content

36% Organizations that offer social learning today

23% Organizations that plan to offer social learning in the next few years

Source: Udemy Data
Mobile learning provides just-in-time learning on the job

- Accelerate learning
- Reduce training cost and time: learners self-select
- Reduce time away from job
- Faster new worker readiness

Source: Udemy Data
Real-life case examples
Real-life case examples

1. In-Aisle mobile training at Home Depot
2. Ramp safety VR training at Delta Air Lines
3. Leveraging AI to impact business value
4. Mobile and digital learning at Udemy
5. Social learning at Udemy
CASE STUDY #1

In-aisle mobile training at Home Depot
Learning challenges for Home Depot associates

- Training is delivered away from work as a “firehose of information”
- Not convenient or timely in the moment of need
- Transactional
- Metrics are based on completing and reducing hours dedicated to training
Business challenges for training at Home Depot

• Payroll pressure: when associates are in the training room, it’s time off the floor
• The majority of formal training doesn’t apply to what associates need to do
Reduce the “formal training firehose” by providing access to information at the moment of need

The app was deployed on a work device

Pilot and Control groups to show value
PocketGuide demo
PocketGuide demo

ANATOMY of a Chainsaw

Click on a button below to learn more about Chainsaws:
- Chain Brake
- Engine/Motor
- Bar/Chain
- Vibration Dampering System
- Tension Adjustment
- Pole Pruners
Utilization / Motivation

Hypothesis: Access to on-demand, in-aisle learning content with game mechanics will motivate associates to engage in learning

Effectiveness

Hypothesis: If associates consume knowledge at their own pace on the sales floor, then knowledge transfer will be more effective
Efficiency

Hypothesis: Consuming content on the sales floor will allow associates to become equally (or more) proficient in less training time.
## General Project Information & Activity

### PK Challenge Completion (Pilot Region)

<table>
<thead>
<tr>
<th>Associate Counts</th>
<th>PK Challenge Completion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current DSW Associates</td>
<td>Control Group</td>
</tr>
<tr>
<td>TTL</td>
<td>%</td>
</tr>
<tr>
<td>TTL (Base)</td>
<td>750</td>
</tr>
<tr>
<td>TTL (Back)</td>
<td>750</td>
</tr>
<tr>
<td>Updated below (200)</td>
<td>127</td>
</tr>
<tr>
<td>New Hires (2019-2020)</td>
<td>222</td>
</tr>
<tr>
<td>Transfers (2020 &amp; 2021)</td>
<td>82</td>
</tr>
</tbody>
</table>

- **304 new associates in the pilot region**

### Motivation

- **On the in-app survey, 90% of associates in the Pilot group answer yes to questions about how PocketGuide has helped them take care of customers and build confidence in the aisles**

### Web Traffic Metrics

<table>
<thead>
<tr>
<th>Traffic Group</th>
<th>Leader Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pocket Guide</td>
<td>TW</td>
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<tr>
<td>Leader Board</td>
<td>TW</td>
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<tr>
<td>Traffic Group</td>
<td>TW</td>
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</tbody>
</table>

- **Pilot group achieved proficiency 46 days quicker than the Control group**

### Effectiveness

- **71.24% vs 93.00% (Pilot vs Control)**

### Business Metrics

- **No adverse impact on sales**
CASE STUDY #2

Ramp safety VR training at Delta Air Lines
VR as a scalable way to simulate ramp environment for safety training
Metrics post VR training

- 12 flights were observed pre and post VR training
- 5 flights performed better post VR training
- Walk around quality for agents improved from a score of 3 to 5
- Distribution of VR scores across agents also highlighted top performers
Majority of agents found VR training experience “valuable”

How much of an impact do you feel virtual reality would have if implemented for training efforts within the below the wing operation?
Agents also valued ease of use and content quality

Please rate the overall ease of use of this type of training technique

Overall, how helpful was this training in understanding the requirements of the aircraft inspection walk around procedure?
Agents found all components of the training useful

Which part of the walk around was most impactful within your experience?
Metrics post VR training

• Authentic, scalable simulation that does not require live aircraft or use of the work environment

• Real time scoring assessment of current proficiency in the field on eight testing points
Metrics post VR training (continued)

• Station level proficiency scores can be calculated and targeted for further training

• A baseline measure of competency for each individual with subsequent retest scores
VR safety training: next steps

- Perform a station test to capture additional feedback and measure success for use in the field
- Test Plan will include a pre and post observation period along with a reassessment opportunity for low scorers
- Cost to roll-out further estimated <$3K per kit purchased across 140 stations
- Total POC cost: <$100K
CASE STUDY #3

Leveraging AI to Impact Business Value
AI can take learning analytics from descriptive to prescriptive
AI determined efficacy of firm’s course content
## AI leveraged adaptive learning to drive performance

<table>
<thead>
<tr>
<th>Increase revenue</th>
<th>Top line growth</th>
<th>Increase efficacy of content and autonomous personalized delivery will result in more productive employees</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Freeing billable time by reducing time commitment for equivalent or improved learning, improving learning efficiency</td>
</tr>
<tr>
<td>Decrease cost</td>
<td>Spend less time training</td>
<td>Optimize content put in front of all learners</td>
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<tr>
<td></td>
<td>Spend less on 3rd party content</td>
<td>Identify and remove superfluous courses and content</td>
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<tr>
<td>Reduce risk</td>
<td>Improve process adherence</td>
<td>Making sure knowledge transfer is occurring and improving learning efficiency</td>
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<td>Eliminate knowledge gaps</td>
<td>Identify and remediate knowledge gaps in personalized, real-time delivery</td>
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</table>

### E&CPricing

- **25% mismatch between assessment and course content**
- **Reduce time to proficiency by as much as 60%**
- **Increase engagement by 35pts**
- **NTI leveraged by 92% of learners**
- **30% mismatch between assessment and course content**
- **Reduce time to proficiency by 14%**
- **Question level insights**
- **Improve knowledge transfer by up to 50 points**
- **NTI leveraged by 97% of learners Knowledge transfer increases 10+ points**
When proficiency is NOT proficiency

- You will notice 2 disparate quiz scores in the dashboard view above.
- From the perspective of the LMS an 88% quiz score looks good. However, the LMS gets this score after the completion event, with the best of several attempts reported, and can assign different weights to questions.
- The AI quiz score aggregates ALL attempts, and does not wait for completion to update.
- Therefore, the LMS (SCORM) score may misrepresent the true understanding of your learners.
CASE STUDY #4

Mobile and digital learning at Udemy
Why is digital learning so effective?
Machine learning and algorithms can personalize learning at scale.

Interactions between our students and our content create billions of learning interactions across thousands of topics and skills.

The Udemy Knowledge Graph

100K Courses

30+M Students
Deliver personalized recommendations based on past behavior
Help employees navigate skills along their career
Drop Everything and Learn (DEAL) Hour

Make it possible

- Dedicated Time
- Available for ALL
- Champions
CEO and executives share what they’re learning on internal social media

Shelley Osborne  3:03 PM
Kevin is taking YouTube Vlogging!!!
Time to DEAL

Dinesh Thiru  2:19 PM
Ready to DEAL! I’m taking the ultimate drawing course so that my sidewalk chalk drawings with my son aren’t all (truly terrifying) dinosaurs and suns.
Image uploaded from iOS
Congrats! You may move to the next section.
Possibilities of Udemy’s mobile AR onboarding experience

- Questions (MC, Free Text)
- Leaderboards
- 360 video or photo tours
- Selfies
- Polls and Surveys
CASE STUDY #5

Social learning at Udemy
Encouraging peer-to-peer learning at Udemy

Make everyone a teacher
Drop Everything and Teach (DEAT) Hour

Want to MAKE YOUR OWN CHOCOLATE?

Drop Everything and Teach
Turn your passion into a course!

Check #udemy-learns to sign up!
Udemy’s Manager Untraining Program is built around social learning

<table>
<thead>
<tr>
<th>Instructions:</th>
<th>Topics I want to learn:</th>
<th>Topics I would teach: (include name please!)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shelley Osborne 19h Management Topics 1. What management topics do you want to learn about? 2. What management knowledge can you share with your peers? For example: • Managing distributed teams • Navigating through change • Managing former peers • etc.</td>
<td>Anonymous 19h How to manage up Tips on communicating to executives</td>
<td>Anonymous 19h Example Manager Topic Shelley Osborne</td>
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<tr>
<td></td>
<td></td>
<td>Anonymous 19h managing someone who does not directly report to you</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anonymous 4h managing someone who doesn’t report to you (Shannon Hughes)</td>
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<td>Anonymous 4h Tips on communicating with Execs (Shannon Hughes)</td>
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<td></td>
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<td>Anonymous 7h retention strategies for roles with high likelihood of burnout</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anonymous 9h Managing senior technical folks</td>
</tr>
</tbody>
</table>
Slack community for managers

Google Employees Weighed in on What Makes a Highly Effective Manager. Technical Expertise Came in Dead Last | Inc.com
https://www.inc.com/michael-schneider/google-did-an-internal-study-that-will-forever-change-how-they-hire-and-promote-.html?cid=s20100266r_share-facebook

Google Employees Weighed in on What Makes a Highly Effective Manager.
Technical Expertise Came in Dead Last
Is it possible to engineer the perfect boss? Google was up to the task and found data that will forever change the keys to getting promoted.

June 20th, 2017 (80 KB) •

The transition to leadership also requires a transformation of thought. Managers have to redirect their focus from the "work" to their staff. Effective managers take care of their people, understanding that their people take care of the work.

Alexandra Sepulveda 4:45 PM
interesting that these were the top 2 Be a good coach; empower your team and don't micromanage:
@phil.king

Phil King 4:46 PM

Darren Shimkus 4:52 PM
This makes intuitive sense. However, I've recently seen research that indicates technical skill/my boss has done my exact job as driving the highest satisfaction/results on a team. I will try to dig it up.

Phil King 5:09 PM
That'd be interesting to see @darrenshimkus - my experience / observation has been more that direct experience is a moderate indicator but not predictor of acumen for mgmt. Maybe stronger indicator for some teams (non-technical) than others (technical)?
Q&A

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Thank you