Know Your Risk: The Learning Science Behind E&C Program Efficacy

If you're a fan of the HBO satire, *Succession*, you will recall that throughout Season 3, RoyCo executives find themselves concerned by how the Department of Justice (DOJ) will consider their corporate malfeasance. Federal sentencing guidelines and the Foreign Corrupt Practices Act (FCPA) are front and center in dialog, as Tom Wambsgans and other members of the extended Roy family-company leadership ponder jail time and whether cooperative actions might mitigate their situation. In addition to current television dramas, popular documentaries, such as The Dropout podcast, which follows the trial of Theranos founder, Elizabeth Holmes, feature commentators and fans alike musing about the behaviors that drive corporate ethics and the factors that jurors consider to be violations of codes of conduct. In both programs, participants wonder if potentially contrived behaviors will reflect "favorably" on the defendant in the eyes of the government. As Elizabeth serves her 11-year sentence, and as the news pivots among potential antitrust cases, the power of the DOJ is ever present.

The DOJ has long examined the strength of corporate ethics and compliance (E&C) programs as it decides on prosecution and possible penalties. Organizations with strong E&C programs often receive more favorable treatment, which can include deferred prosecution and lower penalties, than those without. Organizations with weak E&C programs place themselves at significant risk when things go wrong, as examples from popular culture illustrate. Following DOJ guidance for effective E&C training programs can mean the difference between survival and disaster in the face of a government prosecution. In the Theranos and the *Succession* storytelling, prescriptive E&C training was not part of the narrative.

In fiction and here in the real world, the breadth and complexity of E&C issues that employees must understand continue to grow. At the same time, few hours each year get earmarked to train thousands of employees on these important and timely concepts. To meet the competing challenges, organizations must make their learning programs as effective and efficient as possible. In terms of efficiency and expense, eLearning has proven to be the optimal solution for E&C training for most organizations. Asynchronous eLearning is more flexible and less intrusive than other modes of instruction such as in-person, live group training. And, the pandemic has impacted the veracity of such live trainings, at least in the immediate term.

SAI360
RISK FROM EVERY ANGLE

Does asynchronous E&C training really work?

Many organizations blanket the workforce with mandated courses and then point to 100% completion rates as evidence that learning programs are effective. However, requiring that everyone complete training or risk bonus forfeiture, demotion, or even termination only demonstrates effective "command and control" leadership, not lasting behavioral change. Other organizations go a step further to include brief quizzes following learning activities and cite "pass" rates as efficacy data points. At best, completion and pass rates are thin evidence, and the dearth of true data on program efficacy has not escaped the DOJ. In 2019, it released guidance for evaluating corporate compliance program efficacy, creating a dilemma for organizations and training providers alike.[1] Because the guidance was written from the DOJ's perspective, many organizations find it challenging to translate the questions within it into a framework that proves effectiveness.

Demonstrating true understanding and behavioral change following a short learning episode is difficult. Effective eLearning is more challenging to produce than it might appear on the surface. Most eLearning architecture is missing critical linkage between the initial learning and the ability to retrieve and apply that learning when needed. Good eLearning design delivers training that is relatable AND memorable, so learners remember better for later, when it counts.

Designing training programs that indicate efficacy requires specialized expertise. This paper examines the science behind breaking the cycle of error persistence—a key inhibitor of training effectiveness—and highlights how a framework that embeds learning science naturally yields data that can be used to demonstrate E&C program efficacy on an enterprise-wide basis for the organization's leadership, board, and the DOJ.

Build Efficacy into E&C Training Architecture

Imagine you're taking a quiz on an anti-bribery learning module, and you must answer three out of four questions correctly to pass. You get a score of 75 (three out of four questions answered right) and you move on. Do you ever go back and review why you got that one question wrong? Let's be honest, probably not—especially if you're buried in work.

Learner tracking shows most people skip this step. General compliance training is different from training that is job-specific, task-oriented, or skill-building, so there's tension between muscling through the lesson to return to work as quickly as possible and truly learning the concepts so they are readily applicable in the real world at the time of need.

Moving on may seem like an effective time management strategy in the short term, but what happens when you get tested again and continue to make that same mistake year after year? The question may be asked a little bit differently each time, but you don't know the material regardless of how it's framed. This is what is known as error persistence. Memory, recall, and error persistence research has found that learner misconceptions and errors can carry over from year to year, despite repeated training. Without direct opportunity to remediate incorrect responses, error persistence not only takes hold, but the incorrect information may be held in high confidence. This can result in a double jeopardy situation where employees lack both the knowledge of how to perform well and the awareness that they are performing poorly.[2] It is easy to see how error persistence presents a people risk vulnerability: When learners don't take the time to figure out what they got wrong and why, they won't know how to do the right thing when it matters most—on the job.

How do companies break the cycle of error persistence, build an ethical workplace, and provide better evidence of efficacy for the DOJ? SAI360's **Know Your Risk** framework is deeply rooted in learning science research to maximize impact without sacrificing efficiency. The following are just a few of the learning science practices we employ to make E&C training programs measurably engaging and effective without being overly long.

Benchmark learner confidence at the outset.

At the beginning of the SAI360 **Know Your Risk** experience, learners are presented with a question asking them to assess their confidence against an overarching learning outcome for the entire course. For instance, *"How confident are you in your understanding of data privacy?"*

Learners then take a brief pretest to gauge their knowledge prior to taking the course, which benchmarks how much they actually know against what they think they know. For each subtopic in the pretest, learners are asked a knowledge question, then a confidence question. Each knowledge question is tied to a specific learning objective that scaffolds that experience to the intended outcome of the course.

This confidence-based learning approach is designed to assess what learners know and how confident they are in their answers, both before learning and then again after learning. Why assess learner confidence? Benchmarking confidence leverages what is known as the "hypercorrection" effect. When adults make mistakes with high confidence, they are surprised to be wrong and will encode the correction better. According to one study, "The greater the prediction error, the greater the learning."[3] Ultimately, this confidence metric can also be used to calculate an overall "risk score" for each participating organization's workforce population—an important step toward demonstrating efficacy, as we will discuss later.

Provide immediate feedback.

Errors persist when feedback isn't readily provided. Numerous studies during the past decade point to the necessity of remedial feedback to combat error persistence.[4] Following each learning module, **Know Your Risk** learners are again asked about knowledge and confidence in a mirrored posttest, but they are provided feedback immediately after each question to disrupt an error from taking root.

The quality of feedback provided is critical to training efficiency. Simply stating an answer is "incorrect" isn't sufficient. The research on this element of training design is clear: "...merely providing learners with correct/incorrect feedback does little to help them correct their errors, and sometimes is not better than no feedback at all. In contrast, feedback messages that expose participants to the correct answers are much more likely to promote successful error correction." Furthermore, "For optimal error correction, learners must not only be told that they have made a mistake, but also what the correct answer was."[5] In other words, true mastery of a topic does not take place unless learners are clear on what was missed and WHY.

By reviewing feedback, adults usually quickly understand their mistakes. As mentioned earlier, when they've made mistakes with high confidence, they're surprised to be wrong. That moment of mild shock works to encode the correction better.[6] Additionally, a low-confidence response, when correct, also helps the learner encode. This makes sense for learners who may have barely paid attention to the training but simply guessed right. In their surprise at being correct, they remember better too. Research further demonstrates that failing to provide substantive feedback during annual E&C training courses may reinforce the negative impact of unmitigated error persistence. Immediate feedback reduces the retrieval strength of the misconception while increasing the retrieval strength of the corrected response.[7]

Adding immediate feedback to eLearning answer checks makes the most impact in the least amount of time for learners. This is where efficiency meets efficacy. It's proven that generating an error and receiving corrective feedback is much better for learning than simply studying.[8] As there is no studying involved in mandatory E&C training, reviewing feedback is the best use of learner time if they want to improve recall of critical information.

Test and retest.

Testing plus feedback is a powerful combination. There is evidence that retesting has a protective effect: "despite the strong hypercorrection effect...high confidence errors did tend to return at a delay when there was no intervening post feedback test. The most interesting result of this experiment – and one that has educational relevance – is that including a test immediately after the corrective feedback protected against this return of the errors."[9] In other words, retesting after providing substantive feedback breaks the cycle of error persistence. This is a cogent endorsement for not only testing and retesting, but also for delivering meaningful feedback for lasting and impactful error correction.

Space out learning opportunities.

While learners may remember the training long enough to pass the course, this alone does not prove efficacy. Training program efficacy should be based on long-term retention. Memory is a constructive process, and foundational knowledge needs to be built as learners study more complex material. Research shows that spaced retrieval practice—particularly retesting at intervals—has a positive impact on learners' long-term retention.[10] Effective training frameworks embed opportunities to demonstrate learning after time has passed, to give learners' memories time to rest and refresh.

In the case of E&C training, employees need to remember the tenets of their training in order to apply them in the real world. **Know Your Risk** learners refresh their knowledge with relevant microlearning episodes spaced out during the months between annual training. By completing follow-on microlearning at intervals between annual training cycles, learners have opportunities to remember better over the long term, strengthening recall for real world application. Feedback should always be included in refreshers as well, as it helps remediate error persistence and improves encoding of knowledge.

Create a sense of safety.

Some learners get distracted by the fear of making a mistake while being evaluated, which makes it harder to learn. Creating a psychologically safe space to learn makes it easier. Learners should be able to go down a wrong path in a learning activity and try again, without punitive grading. As learners re-attempt, it is important to let them know why some behaviors might be better than others when it comes to ethical behavior. That is not just helpful feedback. It also informs a reflective practice where learners don't stop at choosing the correct option but instead satisfy their curiosity to understand the "why."

Demonstrate Program Efficacy by Connecting Outcomes to Risk

The evaluation of program efficacy and its impact on the organization's risk profile should not be limited to training module completion rates and quiz scores. Information about learners' performance and level of confidence before and after learning, and how their responses changed while they are experiencing the training episode, are measurable insights on the efficacy of training and on the overall impact of that training on the workforce and by extension, the organization's risk profile.

Confidence-based assessments improve reliability and validity of the testing instrument. Confidence-weighted scoring provides a mechanism to measure the dynamic of learners' knowledge and confidence levels:

- When learners are highly confident in incorrect responses, there is a misconception that needs to be corrected and a higher probability that an incorrect action will be taken.
- A sizable proportion of the population making the same kind of error may indicate that the material is not being absorbed by the learners due to faulty learning resources or environmental factors, such as a lack of psychological safety or an undesirable workplace culture.
- When learners move from low to high confidence during their training, this reflects a positive experience, engagement, curiosity, and a workplace culture that is supportive of learning.

By identifying the proportions of the organization's population that lie along the spectrum of confidence-weighted scores, it is possible to infer a corresponding level of risk applied broadly to the learning cohort.[11] As the proportion of the organization that is both correct and highly confident increases, the corresponding risk to the organization should decrease. This information about the change in the organization's relative risk after training provides a new measure of program efficacy that can help demonstrate the organization is addressing DOJ requirements.

Break the Cycle of Error Persistence and Provide Evidence of Efficacy for the DOJ

Fortunately, E&C program efficacy does not have to come at the expense of efficiency. At SAI360, we specialize in helping clients build ethical cultures that measurably decrease people's risk. SAI360 **Know Your Risk** learning modules creatively apply learning science to drive change and foster desirable behaviors while minimizing seat time.

To learn more about the application of learning science in your organization's E&C training and risk analysis, you can **submit your contact request** on our website.

Endnotes

1. U.S. Department of Justice Criminal Division. Evaluation of corporate compliance programs. (June 2020): https://www.justice.gov/criminal-fraud/page/file/937501/download.

2. Mullet, Hillary G., and Marsh, Elizabeth J. "Correcting False Memories: Errors Must Be Noticed and Replaced." Memory & Cognition 44, no. 3 (2016): 403–412. https://doi.org/10.3758/s13421-015-0571-x.

3. Metcalfe, Janet. "Learning from errors." Annual Review of Psychology 68 (2017): 465-489.

4. Metcalfe, Janet. "Learning from errors." Annual Review of Psychology 68 (2017):465-489. Butler, A. "Multiple-choice testing in education: are the best practices for assessment also good for learning?" Journal of Applied Research in Memory and Cognition, 7 (2018): 323-331. Huelser, B., & Metcalfe, J. "Making related errors facilitates learning, but learners do not know it." Memory and Cognition 40, no. 4 (2012): 514-527. Marsh, E., Roediger, H., Bjork, R., & Bjork, E. "The memorial consequences of multiple-choice testing." Psychonomic Bulletin & Review 14 no. 2 (2007):194-199. Mullet, H., & Marsh, E. "Correcting false memories: errors must be noticed and replaced." Memory and Cognition 44 (2016): 403-412.

5. Mullet, Hillary G., & Marsh, Elizabeth J. "Correcting false memories: errors must be noticed and replaced." Memory and Cognition 44, no. 3 (2016): 403-412 p. 404. https://doi.org/10.3758/s13421-015-0571-x.

6. Metcalfe, Janet. "Learning from errors." Annual Review of Psychology 68 (2017): 465-489.

7. Butler, A., Fazio, L. & Marsh, E. "The hypercorrection effect persists over a week, but high-confidence errors return." Psychonomic Bulletin & Review 18, no. 6 (2011): 1238-1244.

8. Huelser, Barbie & Metcalfe, Janet. "Making related errors facilitates learning, but learners do not know it." Memory and Cognition 40, no. 4 (2012): 514-527.

9. Metcalfe, Janet & Miele, David B. "Hypercorrection of high confidence errors: prior testing both enhances delayed performance and blocks the return of the errors." Journal of Applied Research in Memory and Cognition 3 (2014): 189-197, page 195.

10. Hopkins, Robin et al. "Spaced retrieval practice increases college students' short- and long-term retention of mathematics knowledge." Educational Psychology Review 28 (2016): 853-873.

11. Importantly, risk assessment is not applied to each individual learner in keeping with privacy norms. Instead, the trend of the workforce is measured and modeled. Each new training can be added to this risk profile, and changes over time can be reported to indicate program efficacy.

Our unified approach to risk sets us apart

Today's complex risk landscape demands more. SAI360 leads the way with an integrated GRC platform and Learning solution that spans the entire risk spectrum.

Risk Management Solutions

- Enterprise & Operational Risk Management
- Regulatory Change Management
- Policy Management
- Third-Party Risk Management
- Internal Control
- Internal Audit
- Incident Management
- Conflicts of Interest (COI) Disclosure Management
- IT & Cybersecurity
- Business Continuity Management

Ethics & Compliance Learning Solutions

- Anti-Bribery & Anti-Corruption
- Competition & Anti-Trust
- Conflicts of Interest
- Data Protection & Privacy
- Information Security
- Exports, Imports & Trade Compliance
- Harassment & Discrimination

Interested in learning more about SAI360's Ethics & Compliance Learning solutions?

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