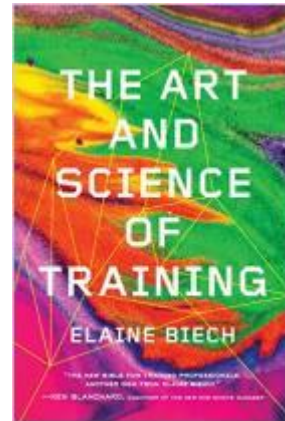# GoodBook Summary

The Art and Science of Training

Elaine Biech

Recommendation

Training and development expert Elaine Biech packs her 30 years of experience designing, delivering and evaluating learning programmes into a detailed manual of effective workplace training. She covers the essentials of adult learning theory and modern frameworks for learning programme design – and even includes advice about which refreshments to serve at workshops. Biech stresses her core advice and theme to ensure that those who are new to leading learning and facilitation can create and deliver first-rate training programmes.

Take-Aways

- Familiarize yourself with the most important adult learning theories and processes.

- Learning professionals must embrace and support informal learning.

- With formal learning programmes, create multisensory impact to help learners retain the information.

- Design programmes in a way that helps learners understand why the content is relevant.

- Technological advances portend big changes in learning, but the principles of design remain the same.

- Being prepared and practicing your program guarantee good performance.

- Know your learners, prepare them, and put their needs front and centre.

- Apply insights from cognitive science to improve your training.

- How you design, deliver and implement training determines to what extent learning will transfer to the job.

- Concern yourself less with training costs and more with business impact and return on investment.

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Summary

Familiarize yourself with the most important adult learning theories and processes.

Excellent facilitation requires understanding the science of adult learning while practicing the art of tailoring training to your audience. Follow five steps of training development: 1) Analyse the problem to determine whether training fits; 2) design the program by determining, documenting and sharing your learning objectives; 3) develop your content by considering free or inexpensive available content before you create original material; 4) implement the training; and 5) evaluate its success against your objectives to adjust and improve.

"Trying to impart knowledge without understanding the learner is like venturing into enemy territory without first doing reconnaissance."

Craft your program using Bloom's taxonomy, which defines learners' mastery of the material you're teaching across six levels:

1. **Simple knowledge** – The ability to memorize facts.

2. **Comprehension** – The ability to explain the learned material or skill.

3. **Application** – The ability to use learning on the job.

4. **Analysis** – The ability to break down new learning to compare or blend it with other learning.

5. **Synthesis** – The ability to use knowledge you've gained to create something new.

6. **Evaluation** – The ability to critically assess the learning and knowledge that you've gained.

Familiarize yourself with the conditions of learning as outlined by educational psychologist Robert M. Gagné. Get your learners' attention; share objectives. Ask what they know already. Use visuals and examples. Let learners practice, and then give feedback. Equip them with tools for the job.

"Trainers need to think about not only what but how they are covering the topic, making sure they do not prevent the learners from uncovering it themselves."

Understand American adult educator Malcolm Knowles's principles of adult learning. Adults learn when they know why the learning matters to them. They need to set their own goals. Acknowledge adult learners' experience and knowledge and build on it. Adults want to learn for intrinsic reasons more than for external rewards.

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Learning professionals must embrace and support informal learning.

In the 1980s, the Centre for Creative Leadership proposed the 70/20/10 framework for learning. This acknowledges that informal learning – comprising informal study, structured assignments, special projects, and the like – constitutes most of adult development. Formal training, on which most learning professionals focus, covers only about 10% of workplace learning; the rest happens on the job and among co-workers. It includes learning from peers, managers, coaches, mentors, and others – as well as teaching others. Design learning experiences with a mix of all three, and incorporate your programme into employee workflow. Connect formal training to social and on-the-job learning with post-course peer discussions and corresponding work projects.

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"If learners expect to be held accountable for using what they learned, they are more likely to transfer their skills and knowledge to the workplace."

Increasingly, employees take responsibility for their own development. Focus less on developing original course content and programmes, and more on supporting learners across the 70/20/10 range of learning.

With formal learning programmes, create multisensory impact to help learners retain the information.

Build a multisensory experience of reading, hearing, seeing, discussing and doing – as well as teaching and presenting. Use visuals, objects, compelling stories and case studies. Invite questions and encourage discussion. Connect your information to other lessons your group may have learned in the past and encourage participants to do the same. Resist showing how to do things or explaining processes. Build in time so employees can practice what they've learned at regular intervals. Make your programme challenging but not so difficult that people shut down.

"Memory experiments with pictures have shown that people can recall seeing hundreds, even thousands, of pictures."

People remember images better than words. Incorporate relevant, high-quality visuals that add to the message. Design your lessons in small chunks and break up the chunks with quizzes or other activities to encourage reflection and practice. Reduce complexity. Mix it up. Include elements of reading, audio, video and active learning.

Design programmes in a way that helps learners understand why the content is relevant.

Tell learners what they'll gain and why it's relevant. Offer plenty of breaks for peer discussion, problem-solving exercises and simulations. Stage practice exercises at regular intervals and follow up with feedback. Skip content rather than sacrifice breaks.

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"Only 45% of organizations have 'significant' or 'good' alignment of talent development to organisational strategy."

Spend about 35 hours to create an hour of traditional training, and between 100 and 250 hours to design an hour of e-learning of average complexity. Develop specific, measurable, attainable, relevant and timely (SMART) learning objectives that define the goal, a time frame and the target level of expertise. Leave time in your closing summary for reinforcing your main points and themes. Set up a page or portal where participants can access resources and post their thoughts and content.

Technological advances portend big changes in learning, but the principles of design remain the same.

E-learning must adhere to the same learning principles as other adult learning. It can be as effective as traditional teaching. In synchronous (live, instructor-led) e-learning, apply classroom training methods. Explain the importance of the learning, acknowledge and build on learner experience, and keep the lesson relevant and solutions focused. Use Google Hangouts to add social elements like class discussions.

"The most effective trainers facilitate processes that encourage learning and create an environment that is conducive to learning."

Technology helps you build libraries of learning and support tools, such as videos that employees can access for help on specific processes. Use or develop tools like return-on-investment calculators and automated Q&As. Leverage social media in your training – before, during and after – to send messages to learners. Use QR codes to give workers easy, scannable access to training videos.

Being prepared and practicing your program guarantee good performance.

Adult learning guru Nancy Duarte asserts that the better a presenter prepares the higher will be the participants' interest in training. Spend at least 10 hours practicing your presentation for every hour of content. Prepare your setting, materials, furniture arrangements, projectors, lighting, room temperature, wall space for hangings, and any other equipment or tools.

"Participants who understand why they are involved in a training session, how it will help them do their jobs better and faster, and how the content relates to them will get more out of it."

Visit your training room a week ahead of time to test your setup and tools. Visit the day prior to make sure everything is in place for learners. Anticipate problems and have back-up plans ready. For e-learning, virtual spaces require similar preparation.

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Introduce yourself and the training before the class begins. Send participants materials to read in advance, assessments, logistics information, messages from participating managers and an invitation for advance questions. Ask participants about their expectations. Before the training starts, make sure your clients describe their objectives. Summarize your content for them and invite them to join the first session of training.

"As a trainer, you should draw on personal memory, use questions to help structure a mental model, work with multiple senses to grab attention quickly, and structure information in short chunks."

Get to your room or virtual space two hours early on the first day, and an hour early on subsequent days. Place a welcome PowerPoint on the screen and a sign with the title of the training at the entrance. Greet your learners, speaking briefly to each person. Remember their names and one other detail about each person. Share your training objectives and discuss why the training should matter to them. Tell the group something personal about yourself to build trust.

Know your learners, prepare them and put their needs front and centre.

Create the conditions for learning by setting the stage and the environment. Let participants add to or alter your goals. Adapt your pace to what they already know. Explain how the content affects their work and set ground rules. Talk to learners individually during breaks. Make coffee, water and tea available.

"When learning is passive, the brain doesn't save what has been presented."

Learners will respond when they sense your enthusiasm. Design an opening that helps you learn about your group. Have participants introduce themselves. Explain any tests or quizzes. Adjust your training in real time according to feedback. If you can't answer a question, offer to follow up later.

"We do not exist to merely 'train'; we exist to improve performance in the workplace."

Be alert to the needs of your group and make adjustments as required. Solicit questions and comments. Address your answers to the whole class. Plan a memorable ending and elicit commitment from your class to use what they learned. Thank everyone and shake hands with learners on the way out.

Apply insights from cognitive science to improve your training.

Multitasking divides attention and distracts from learning. Novelty triggers receptivity to learning and creates new, synaptic connections in the brain. Combat people's tendency to check their phones or give in to distraction by keeping them busy. Stimulating, interactive

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content works best. Build novelty into your content. The brain tires quickly. Give people time to reflect and adjust before switching to new concepts.

How you design, deliver and implement training determines to what extent learning will transfer to the job.

On-the-job application is the most important outcome of training. Understand how much of your training your learners will use at work. Run a training-needs assessment. Work with supervisors and give them the training first, if possible, to get feedback and make adjustments. Or at least share your objectives and curriculum to get their suggestions. Enlist supervisors' support for planned-action learning and other post-training activities.

"Even if you facilitate the best training ever and attend to all the necessary cognitive steps, transfer of learning is dependent upon what happens before training, what happens after training and the involvement of the learner's immediate team."

During training, emphasize practice and simulations. Create an expectation that participants will apply the learning at work. Ask them to promise to apply one concrete thing from the class in the first week after training. Follow up with participants and supervisors later to hear how they applied the learning.

Concern yourself less with training costs and more with business impact and return on investment.

Know the goals of your firm or your client firm and its leaders. Link learning to performance metrics to assess progress quantitatively and justify budget requests with evidence and data.

As you design, plan and implement your programme, consider how you will evaluate each key objective. Make evaluation planning part of the program, and choose a proven method such as Donald Kirkpatrick's four-level evaluation:

- **Level one: reaction** – Collect participant feedback to assess satisfaction, possibly through a post-training questionnaire.

- **Level two: learning** – Gauge learning gain and compare pre- and post-course test results.

- **Level three: behaviour** – Assess how participants apply their learning on the job.

- **Level four: results** – Assess the business impact of your training.

If you evaluate only the first level, you might learn whether participants liked you and the course, but you won't know what they learned or if they applied any of it to their jobs. When you're justifying your training budget, it hurts your case if you lack this level of knowledge. You can combine that assessment with Jack Phillips's methodology of calculating training and development ROI, which allows you to analyse

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Programme costs and benefits. Factor in external events or forces that may influence the results, which helps you see what worked and which aspects require adjustments.

About the Author

Elaine Biech is president and managing principal of Ebb Associates, an organizational development firm. She custom-designs training programs for managers, leaders, and other trainers and consultants and has published more than 75 books.