

How does Generate work?

Generate is an AI-human hybrid system that combines subject matter expertise of content developers with the most advanced artificial intelligence (AI) and natural language generation architecture. It does so by leveraging substantive pretraining on a vast amount of text corpora as a general language model so that it can produce novel, sophisticated, context-dependent content. Based on sample assessment items/content, it builds targeted, custom AI models that generate brand new learning and assessment content that SMEs can actively interact with. Generate models are also designed to be able to improve over time.

Does it produce a bunch of items for me to review?

No, Generate provides item content/passage in an interactive template for SMEs to edit and iterate with. Once the item or passage is complete, the SME saves it and moves onto the next. The items can then be downloaded as text or QTI and go directly onto your pre existing workflow/item authoring system.

Does Generate require me to develop and provide a template for the item?

No, Generate does not require any templates.

Are the resulting items clones of the questions the AI model is trained on?

No, Generated items are new and are not clones of the training items. They will be similar in editorial style, readability level, and item style, but are novel and are completely editable in the interface.

Does Generate search the internet for relevant material to drop in or is the material actually AI-generated?

All content (passages, questions, learning content) from Generate is AI-generated, novel and unplagiarized.

Can Generate create passages?

Yes, Generate can produce novel passages at different lexical levels.

Can Generate create questions about a passage/stimulus that I provide?

Yes, Generate can create questions on passages or stimuli that you provide it. Generate does NOT need new AI models for each passage, so you can introduce new passages and Generate can write items that measure the learning objectives in the context of the passage you drop in.

Can Generate create questions about a particular learning standard, objective, or task?

Yes, we can develop AI models that are specific to measuring specific standards/learning objectives/tasks.

Can Generate develop items at different cognitive levels?

Yes, Generate AI models can be developed to either sample across cognitive complexities or be specific to a particular level (e.g., Bloom's, Webb's DOK). Generate actually excels at coming up with items and authentic scenarios at higher-level thinking skills.

How does Generate use specifications like Task Models, Item Specifications?

Finetune's AI scientists and psychometric/test development staff members include these specifications to assure these are built directly into the AI model.

How much data do you need to generate questions?

Currently, we ask for 30-50 items/examples to train the model. Eight to ten questions for each topic area are the minimum requirement for a basic AI model. Providing a larger number of representative items would help Generate AI to better capture topic relationships. However, we have alternate ways of working if you don't have any items.

Does Finetune assert ownership or copyright on the content created?

Finetune does not assert ownership or copyright on the content you create using our engine. The underlying AI models and technology is owned by Finetune.

Would AI models trained on my content be made available to others?

No, you will have exclusive rights to use AI models we build for your content and these will not be made available to other parties.

What content domains can you generate questions about?

Generate's underlying general purpose language modeling allows us to finetune and transfer our AI models to a vast variety of domains.

We have successfully built Generate AI models across all academic content domains like ELA, science (biology, chemistry, physics), social science (psychology, history, economics), calculus and from grade 3 through postsecondary levels. We have also developed models for logical reasoning and critical analysis and reasoning. In the professional licensure realm, we have developed AI models in such diverse examples as medicine, nursing, HR, sonography/imaging, real estate and brand new emerging fields in cyber security, knowledge of cloud services among others.

What's on your roadmap?

We are working quickly to create the best and most useful product. Right now, we are prioritizing predicting level of difficulty as well as improving the engine to produce higher quality items that require minimal user editing.

Is it possible that this engine can generate all the items for one test?

We can create items based on your specifications, so if we have the specifications for all of the item types and it is a fit with our system, then yes. Since all of the items are novel, they are different enough from each other to not be enemies.

Do you use one algorithm or use a combination of different algorithms?

Generate uses a variety of machine learning and natural language generation (NLG) techniques and algorithms for various aspects of content creation, metrics estimation and

quality checking. Moreover, the system puts these together into an easy to use workflow and intuitive interface.

Can you create open response question items? Technology Enhanced Items? Situational Judgment Tasks?

Yes as long as we have sample items (6-10 per domain).

Can someone edit the text in the interface?

Yes you can edit any text in the stimulus material, in the stem of the question, or the answer options.

How does Generate generate keys and distractors?

Generate uses advanced NLG techniques to produce a set of plausible answer and distractor options (in a probabilistic sense) for a given or auto generated stem.

Can Generate produce more than one right answer so I have options to choose from?

Yes, Generate creates multiple options for the user to choose from.

Have you done any empirical research on the results?

Yes, please visit the website for articles.
<https://www.finetunelearning.com/research/>

Can you work with graphs and images?

Currently we cannot work directly from content in modalities like images, audio, simulations, and speech data, but that is of interest to us. If the material has transcripts or alt-text, that can be used. We are eager to find an early partner who can work with us to explore that space.