

Content Strategy for LXP Authoring when Collaborating with an AI

Presented at Learning Solutions Conference
2022 by Chad Udell

Session 703 - 2:45 PM - 3:45 PM Thursday, April 21

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**Learning
Solutions**SM
CONFERENCE & EXPO
April 20 – 22, 2022 • Orlando, FL

Learning should **Solve**
Problems and **Drive**
Performance.

Doing Digital Learning
Differently.

SparkLearn[®]

Today's TOPICS

1. AI tools that can help us in content creation
2. How to use AI tools to generate content for use in learning platforms
3. How to set up A/B tests in an LXP to review engagement data and improve content
4. What key things you must keep in mind as you collaborate with an AI in order to get better results

About Your Presenter



Chad Udell is the Chief Strategy Officer, at Float and SparkLearn.

As LearningGuild GuildMaster, Chad is recognized as an expert in mobile design and development. He speaks regularly at global conferences (or he did, before the pandemic).

Chad is an ATD press published author of *Learning Everywhere: How Mobile Content Strategies Are Transforming Training*, *Mastering Mobile Learning: Tips and Techniques for Success* and co-author of *Shock of the New*.

**My Most Recent
Guild Research
Publication:**



float®

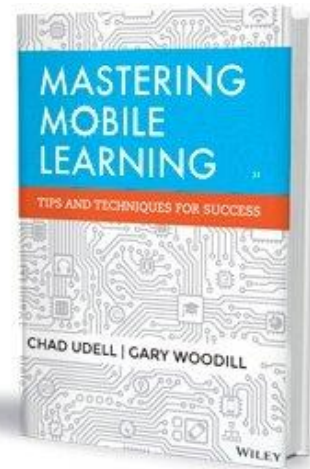
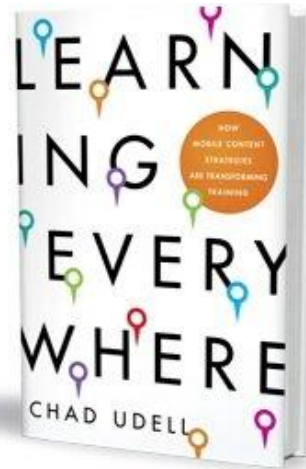
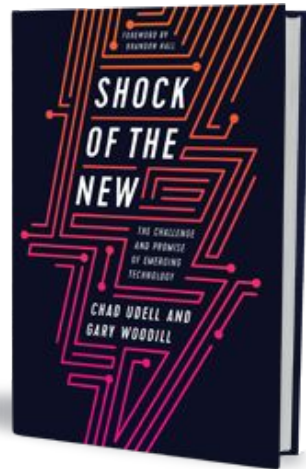
Float mobilizes people, processes, and software in high-performing organizations through custom apps, digital strategy, and human-centered design.

We make
SparkLearn®

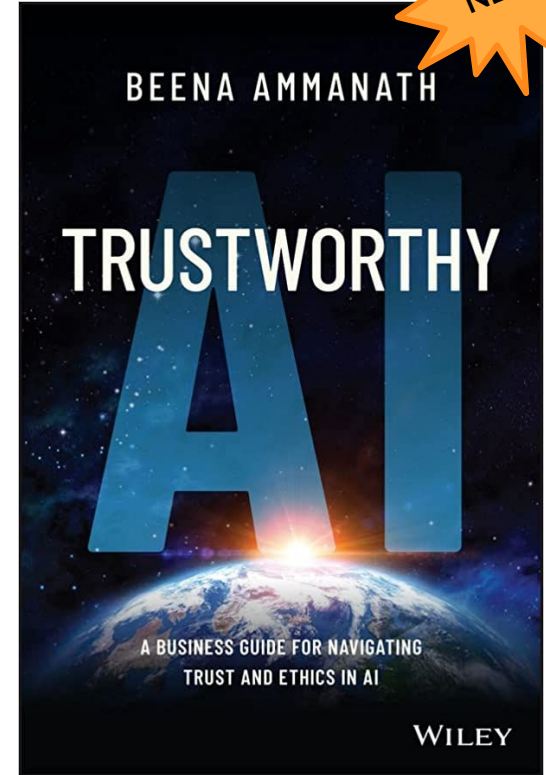
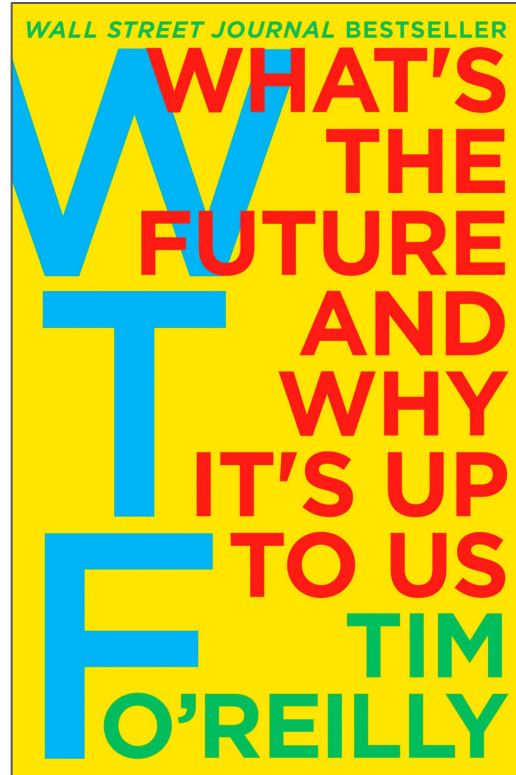
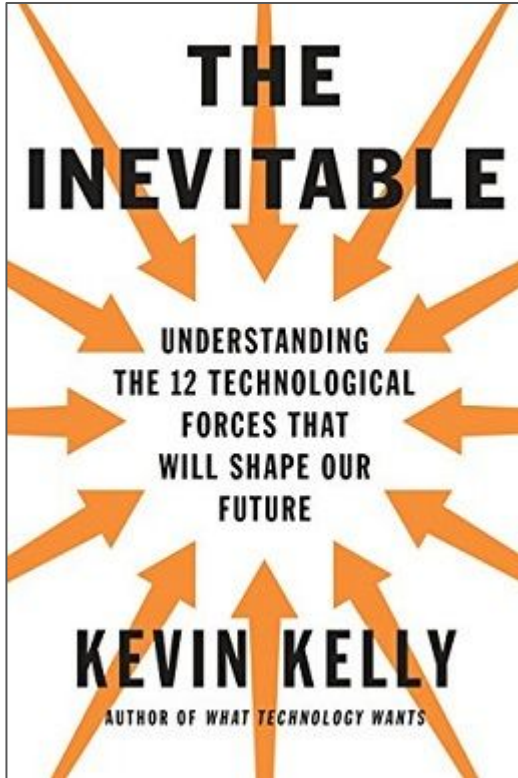
Nice to meet you.

Founded in 2010, Float mobilizes people, processes, and software in high-performing organizations through custom apps, digital strategy, and human-centered design.

We provide expertise and guidance via thought leadership, our publications, and providing research resources to the entire Learning and Development Industry.



A Reading List on AI for Enterprise Technologists



What does AI do for us?

Let's separate hype from reality. Let's alleviate some fear, uncertainty and doubt.

What is AI good at?

It's not something that fixes everything (yet)

Doing things that are tedious while reducing errors

- Error checks on facts
- Grammar
- Tone and voice
- Image anomalies
- Object detection and recognition
- Categorizing and tagging

Creating/sorting/using large volumes of data

- Creating variations on a theme
- Automating workflows for testing and verification
- Finding outliers and oddities
- Assisting in decision making
- Providing alternate paths

Increasing speed/productivity

- Summarizing information
- Creating study tools
- Reformatting content
- Locating related information
- Prediction
- Elimination of wasted efforts

What is AI NOT good at?

This list will certainly shrink as capabilities increase

- Adapting to new domains via “common sense”
- Creating good stuff from scratch
- Taking a naturalistic approach to creating
- Learning continuously and adapting (aka reading the room)
- Using cause and effect as a learning tool
- Ethics and judgement

Where are we with AI?

What is real, what is researched, what is foreseen?

There is a growing mountain of research. But there is increased evidence that we are being bogged down today as specialization extends. The investigator is staggered by the findings and conclusions of thousands of other workers.

— Vannevar Bush (July 1945).

"As We May Think". *The Atlantic Monthly*. 176 (1): 101–108

Types of AI and where they fit in to the discussion today?

Artificial Narrow
Intelligence or ANI



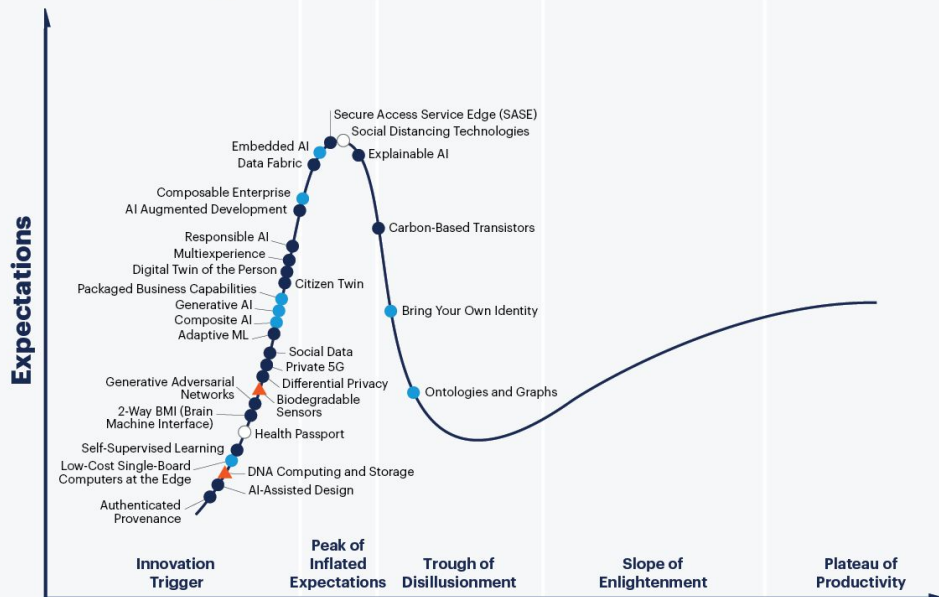
General AI or
Strong AI



Super AI



Hype Cycle for Emerging Technologies, 2020



Plateau will be reached:

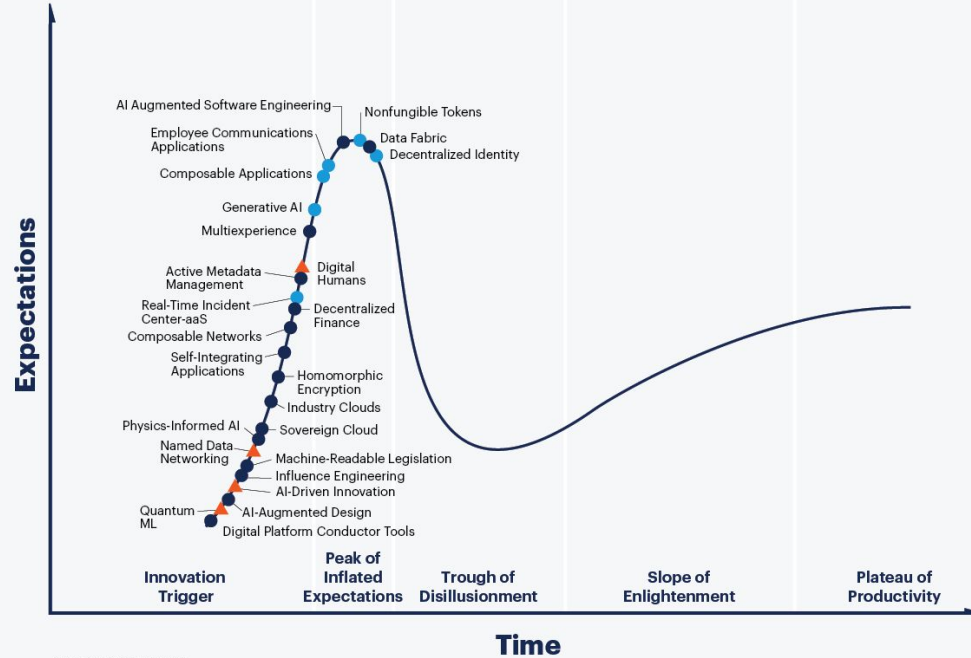
- less than 2 years
- 2 to 5 years
- 5 to 10 years
- ▲ more than 10 years
- ⊗ obsolete before plateau
- As of July 2020

gartner.com/SmarterWithGartner

Source: Gartner
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Gartner

Hype Cycle for Emerging Technologies, 2021



Plateau will be reached:

○ less than 2 years

● 2 to 5 years

● 5 to 10 years

▲ more than 10 years

⊗ obsolete before plateau

As of August 2021

[gartner.com](https://www.gartner.com)

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Narrow AI for Learning Content Authoring and the TRL (Technical Readiness Level)

Where are we with Artificial Narrow Intelligence or AI to be used in a commercial learning product for content creation?

	TRL Level	Qualifier/Development Hurdle
Basic Research	1	Basic scientific/engineering principles observed and reported
Feasibility Research	2	Technology concept, application, and potential benefits formulated (candidate system selected)
Feasibility Research	3	Analytic and/or experimental proof-of-concept completed (proof of critical function or characteristic)
Technology Development	4	System concept observed in laboratory environment (breadboard test)
Technology Development	5	System concept tested and potential benefits substantiated in a controlled relevant environment
System Development	6	Prototype of system concept is demonstrated in a relevant environment
System Development	7	System prototype is tested and potential benefits substantiated more broadly in a relevant environment
Operational Verification	8	Actual system constructed and demonstrated, and benefits substantiated in a relevant environment
Operational Verification	9	Operational use of actual system tested, and benefits proven



AI is transforming the training ecosystem landscape...

Interesting note: the products that are making their mark aren't even from the training domain.

Some example products

You can put a few new things into your toolbox to help you get started.



Grammarly can help you with everything from fixing basic grammatical mistakes to avoiding overused words, keeping your writing concise, and sounding more confident.

Grammarly with teams aids in uniformity and quality.

copy.ai

Copy.ai is an automated creativity tool, you can generate copy in seconds. Feed it some baseline info and let it iterate for you, reducing tedium.

You can use this to help you with A/B testing and variations.



OpenAI

OpenAI's API provides access to GPT-3, which performs a wide variety of natural language tasks, and Codex, which translates natural language to code.

OpenAI tools make **lots** of things faster and easier.

Creating Content with AI

How can AI augment your skills and increase uniformity, productivity and human collaboration?



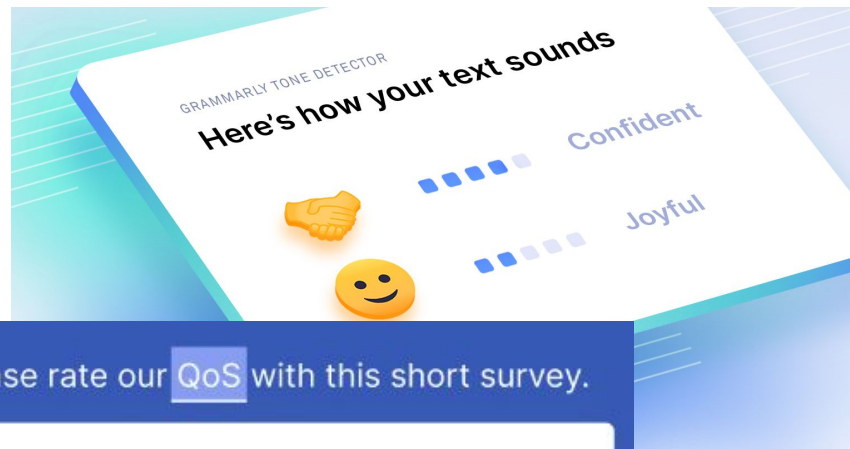
Improving writing quality and uniformity

Grammar checkers are not new.

Widely available writing tools that help with sentiment analysis and tone are.

Writing tools that enforce rules across teams, analyze the usage and adherence to the rules and provide data back to administrators on the utilization and suggestions used by the user base are very new.

Grammarly does all of this as a standalone tool and now with their developer API you can add their product to yours.



Please rate our **QoS** with this short survey.

A ACMECO STYLE GUIDE

~~QoS~~ → **quality of service**

Most customers are unfamiliar with this abbreviation.



Some configurability examples

Status: Activated 

ON-BRAND TONE GROUP



I want to be relatable. ▲

TONES 🗑️

😊 Friendly, 🗨️ Sincere, 🙏 Appreciative

EXPLANATION (DEFAULT)

You sound relatable! Being relatable keeps others positive and avoids frustration. It also reminds them they're talking to another human that cares.

CREATED 03.25.22  

I want to be considerate. ▼

I want to project confidence. ▼

I want to be understanding. ▼

I want to sound conversational. ▼

I want to show interest. ▼

OFF-BRAND TONE GROUP



I don't want to be unhelpful. ▲

TONES 🗑️

😞 Dissatisfied, 😏 Dismissive, 😡 Negative, 🛑 Defensive, 🤔 Skeptical

EXPLANATION (DEFAULT)

If you think someone is mistaken or confused, try to ask open-ended questions rather than sounding distrustful or defensive.

CREATED 03.25.22  

I don't want to be rude. ▼

I don't want to be too blunt. ▼

I don't want to sound too formal. ▼

On for all ▼

Avoid passive voice

Flags use of passive voice. [Example](#)

Clarity

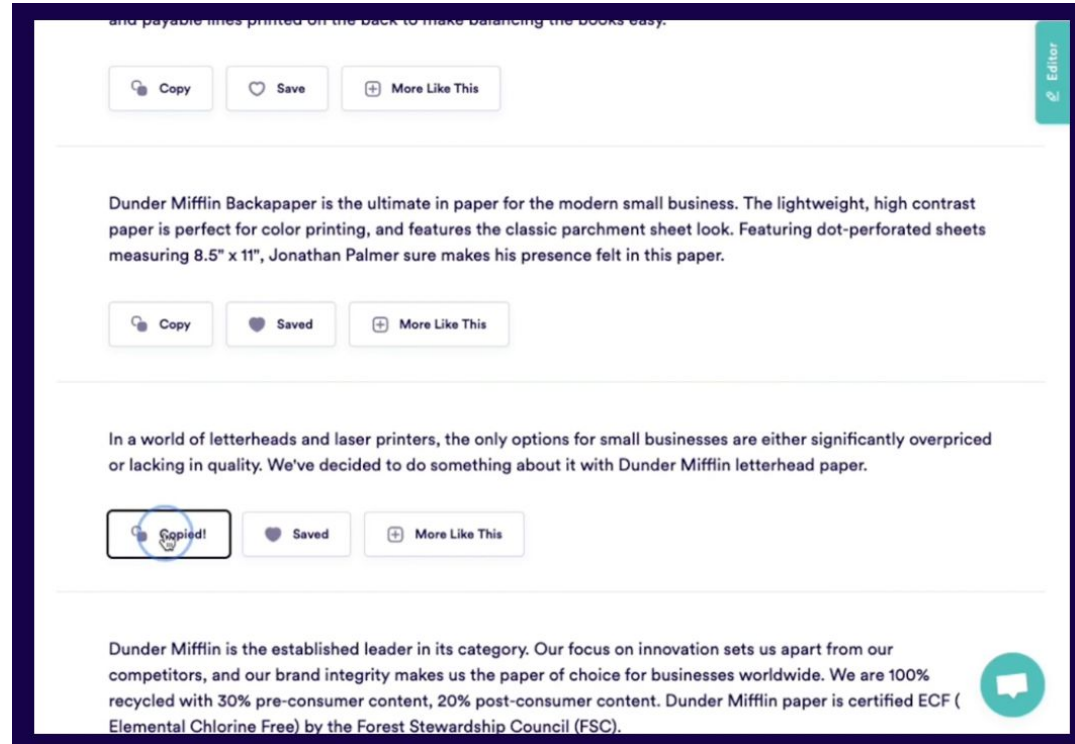


Creating A/B versions to test effectiveness

A/B testing is a technique for testing a hypothesis in which multiple variables are modified and the resulting versions are compared. The goal of is to determine which combination of variations performs the best out of all of the possible combinations.

This doesn't commonly happen in learning technology platforms for a number of reasons:

- Content creation is time consuming and costly
- Giving the wrong content to employees is obviously not a good thing
- LMS are not typically designed to provide alternate versions of content for audiences
- Learning has previously often been seen as a single intervention, rather than an experience or journey



copy.ai

A sample of the templates available

The screenshot displays the Copy.ai template library interface. On the left is a sidebar with a 'Templates' section and a list of categories: 'All Templates' (highlighted), 'Blog', 'Social Media Content', 'Email', 'Website Copy', 'Case Study', 'Video', 'General Business', and 'Fun'. The main area features a search bar with the placeholder text 'Try "Blog" or "Email"'. Below the search bar is a grid of 12 template cards, each with an icon, a title, a brief description, and a category label at the bottom. The cards are: 1. 'Share Latest Video On Social Media' (Video), 2. 'Event Recap Email' (Email), 3. 'Event Recap' (Social Media Content), 4. 'Highlight Product Or Service Benefit' (Social Media Content), 5. 'Build Anticipation / Launch New Product' (Social Media Content), 6. 'Share A Secret' (Social Media Content), 7. 'Contest Or Giveaway Promotion' (Social Media Content), 8. 'Build Anticipation / Launch New Product Email' (Email), 9. 'Start New Project' (button).

Templates

- All Templates
- Blog
- Social Media Content
- Email
- Website Copy
- Case Study
- Video
- General Business
- Fun

Try "Blog" or "Email"

Share Latest Video On Social Media
Create a post to share your latest video on social media!
Video

Event Recap Email
Send a wrap-up email to your customers after an event.
Email

Event Recap
Engage your existing customers and prospects by sharing stories from the event!
Social Media Content

Highlight Product Or Service Benefit
Let your customers know how your business can help them!
Social Media Content

Build Anticipation / Launch New Product
Create a post to build anticipation for an upcoming event or new product launch.
Social Media Content

Share A Secret
Engage your customers by sharing a secret tip, recipe or other fun tidbit.
Social Media Content

Contest Or Giveaway Promotion
Get people engaged with a contest or giveaway!
Social Media Content

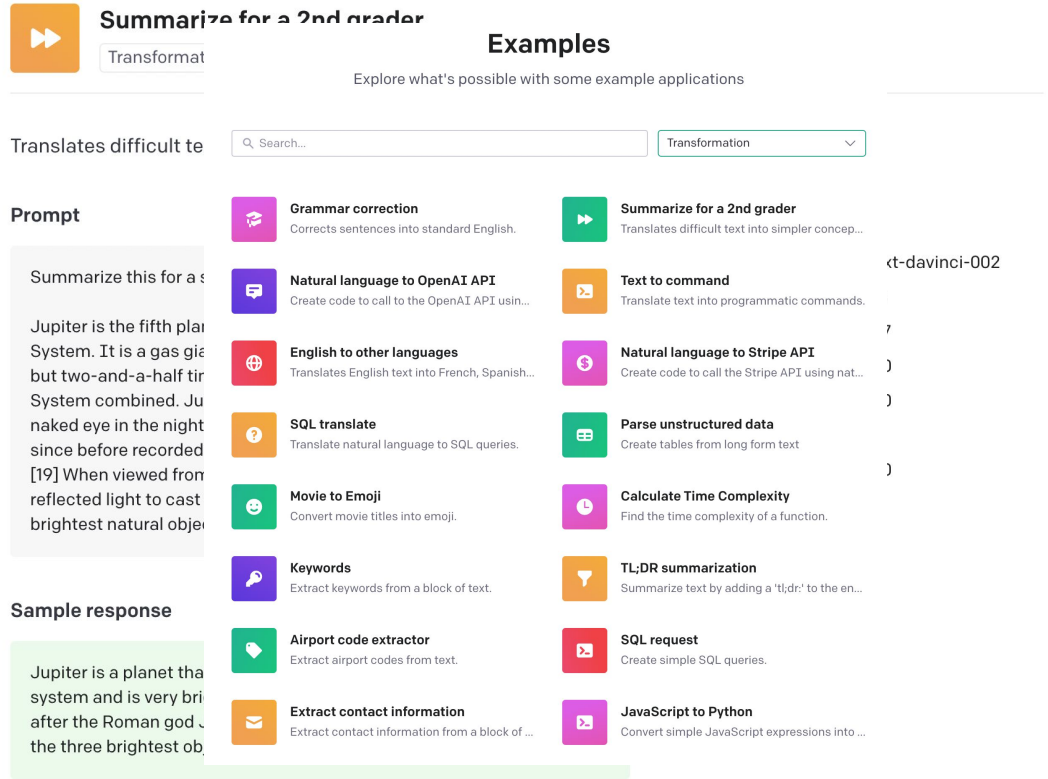
Build Anticipation / Launch New Product Email
Have a new product or service? Create an email to build anticipation and inform your customers.
Email

Start New Project

OpenAI Format, summarize and tag content easily

Good text generation, summarization and other in-depth natural language processing (NLP) based text manipulation has long been a desirable feature for content creators.

With the advent of GPT-3 these tools are becoming more accessible, and with OpenAI's API, products and platforms can now add these features to help editors out.



The screenshot displays the OpenAI Playground interface. At the top, there's a header with the OpenAI logo and the text "Format, summarize and tag content easily". Below this, a section titled "Summarize for a 2nd grader" shows a "Transform" button and a search bar. The main area is divided into "Prompt" and "Sample response" sections. The "Prompt" section contains a text snippet about Jupiter. The "Sample response" section shows the summarized text. To the right, an "Examples" section lists various transformation tasks with their respective icons and descriptions:

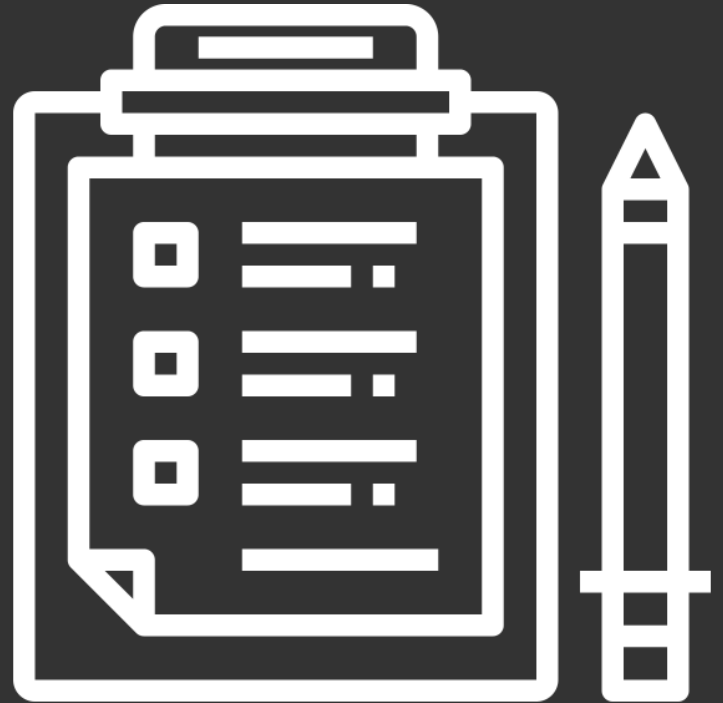
- Grammar correction**: Corrects sentences into standard English.
- Natural language to OpenAI API**: Create code to call to the OpenAI API usin...
- English to other languages**: Translates English text into French, Spanish...
- SQL translate**: Translate natural language to SQL queries.
- Movie to Emoji**: Convert movie titles into emoji.
- Keywords**: Extract keywords from a block of text.
- Airport code extractor**: Extract airport codes from text.
- Extract contact information**: Extract contact information from a block of ...
- Summarize for a 2nd grader**: Translates difficult text into simpler concep...
- Text to command**: Translate text into programmatic commands.
- Natural language to Stripe API**: Create code to call the Stripe API using nat...
- Parse unstructured data**: Create tables from long form text
- Calculate Time Complexity**: Find the time complexity of a function.
- TL;DR summarization**: Summarize text by adding a 'tl;dr:' to the en...
- SQL request**: Create simple SQL queries.
- JavaScript to Python**: Convert simple JavaScript expressions into ...

Testing the Content

How can AI assist your organization in improving the content and (hopefully) learning outcomes?

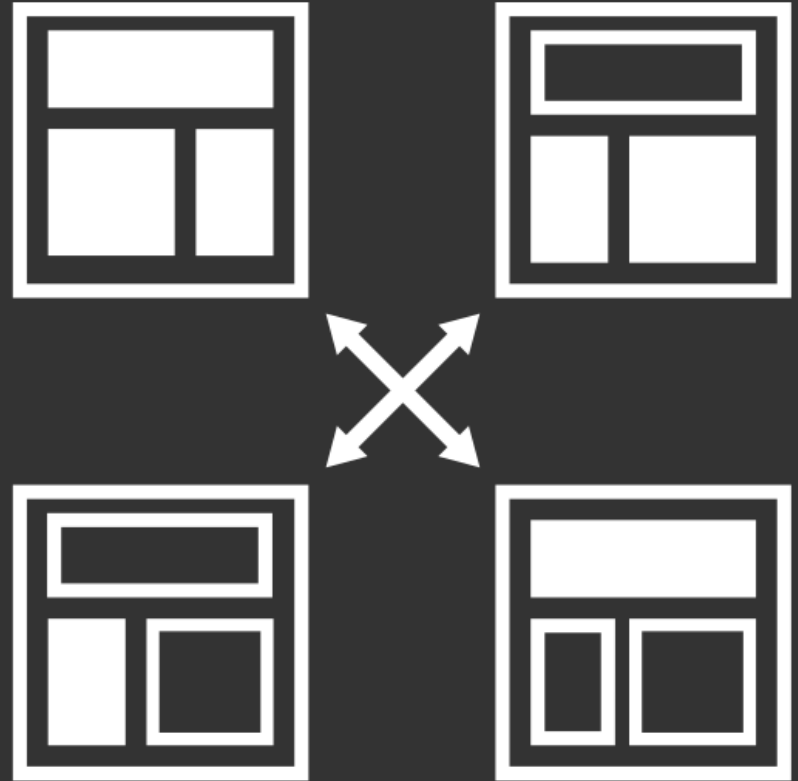
Setting up A/B Testing

1. Know what you are trying to test (eg.):
 - a. Engagement paths
 - b. Completions
 - c. Reuse
 - d. Social or Sharing
2. Use groups, roles and/or tags to segment your audiences
3. Don't provide deficient content, and always factual ensure accuracy and quality
4. Stick with similar language and wording for each group consistently (keep voice similar within each cohort)
5. Don't modify too much in between the variations besides the specific thing you are trying to test for (this is A/B testing, not multi-variate)



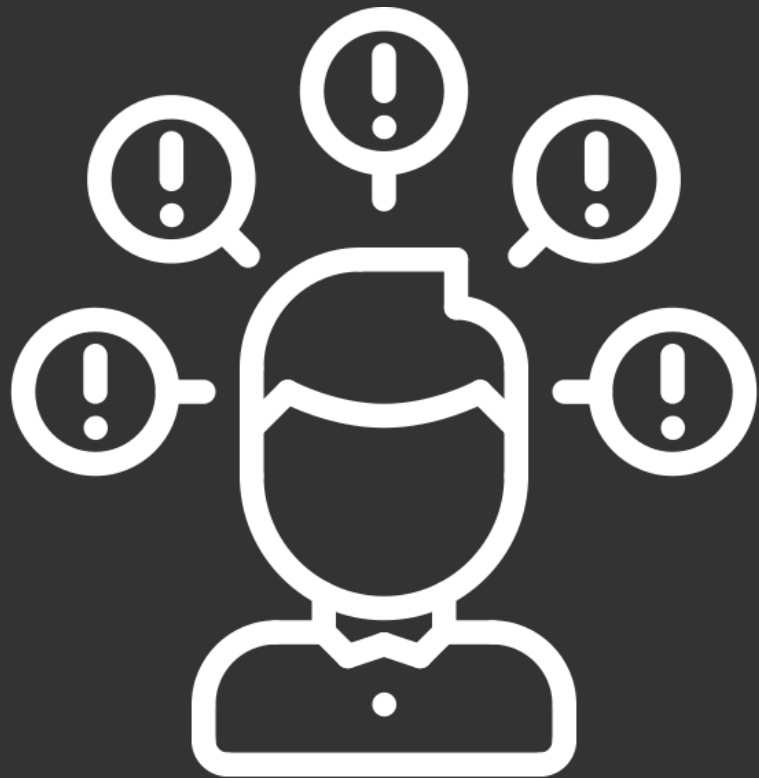
Conducting the A/B Testing

1. Make sure you let the test run its course
2. Focus on only one or two key metrics
3. Rerun the test in order to verify it was accurate
4. After results are interpreted, use those results to improve the content going forward



Issues with A/B testing

1. Balancing exploring vs exploitation
2. Opportunity costs
3. Setup and configuration is time consuming
4. If goals are unclear, test will be unsuccessful
5. If all the content is bad, you only know which is least bad now
6. Each test is pretty specific to that content



More reading:

<https://learningsolutionsmag.com/articles/use-a-b-testing-in-elearning-to-add-choice-show-value>



Measuring the results of working with AI

So, what kind of metrics and measurements are we talking about here?



Some data and insight.

Active Team Members



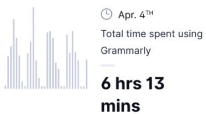
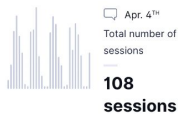
Apr. 4
Active Members 8 / 9
 View member activity
 Remind invited (0)

Communications Overview



Apr. 4
 Your team's communication has improved by **69.1%**
 Sessions with Issues 97.00
 Sessions Improved 67.00
 How is this calculated?

Usage Summary



Grammarly's efficiency impact: 19-38 hours saved (10-20%)

How is this calculated?

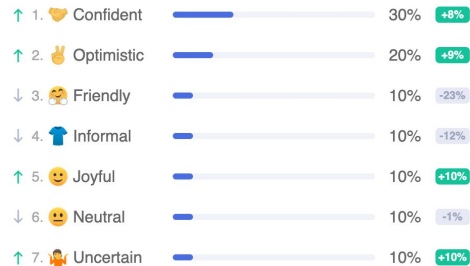
VOCABULARY

You used more unique words than **94%** of Grammarly users.

3,188
 unique words used

TONE

Some of the tones that were detected in your writing last week:



WORDS CHECKED WITH GRAMMARLY OVER TIME



3,751,785

total words checked by Grammarly since Feb 07, 2021 (15,881 last week)

Understanding usage and A/B flow





Using Multi-Armed Bandit Testing

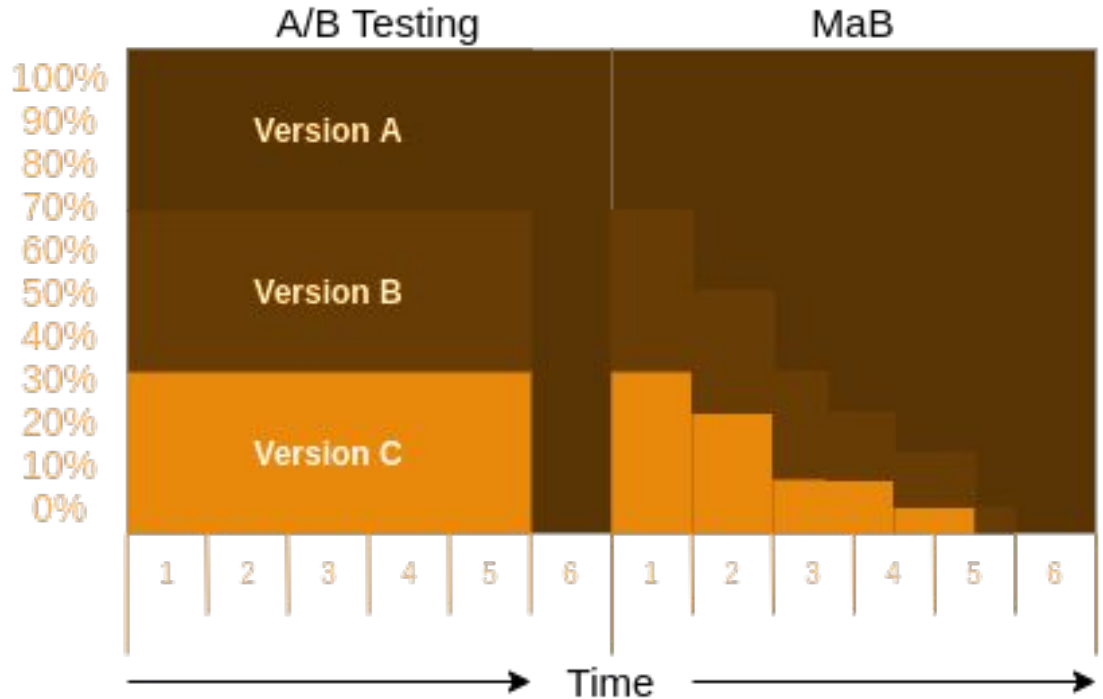
MAB is used to maximize gains throughout the testing period by dynamically modifying the distributions of each product variant.

Advantage:

Cost reduction and obtaining the best group faster.

The trade-off:

It is not possible to perform statistical tests to demonstrate that two versions are statistically distinct or not.

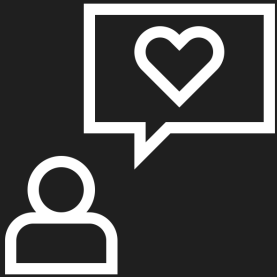


Areas to consider

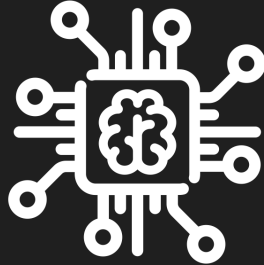
Some things to think about before diving into AI as a content creation tool.

What are the basics you need to ask yourself...

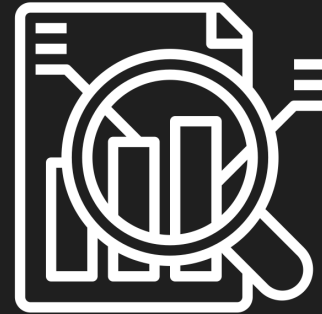
Is content reuse or likability a driver in “why” im doing this?



Is my content good enough, deep enough or broad enough to warrant creating variations?



What metrics do I hope to move?
What am I trying to do?



Are there potential financial implications I should consider before rolling this out?

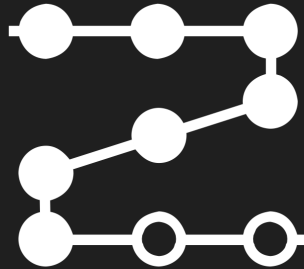


Other things to consider...

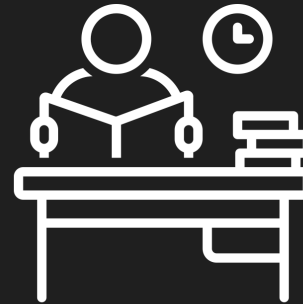
Switching media and content types is a great idea, but again, make sure you aren't tweaking TOO much all at once.



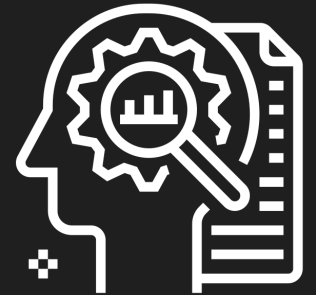
Understanding engagement paths and conversions is the best place to start.



Spend the appropriate amount of time for what the upside could be - don't waste your time or the learners.

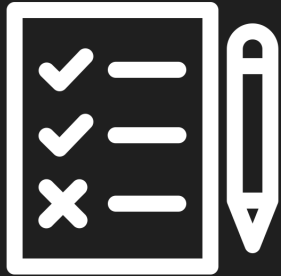


We're trying to improve performance and engagement, not trying to sell products.

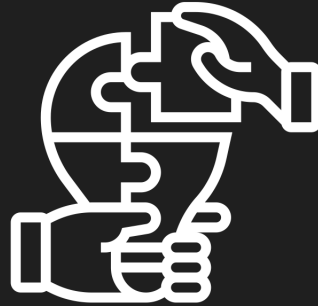


What are my “wins”?

You'll gain time to work on other
“fun” things



Diversifying content options
with minimal extra investment



AI will continue to improve,
making this a long term strategy



Your roadmap will expand
when using third
party products



Some Cool Demos of AI in Action

Let's see Grammarly, OpenAI GPT-3 in action in an LXP

Q&A and Thank you!

You can find me at

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- ◀ @visualrinse
- ◀ chadu@gowithfloat.com
- ◀ www.gowithsparklearn.com

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