



TOOL UTILIZATION, FEASIBILITY & STRATEGIC INTEGRATION REPORT

Prompt Engineering Research
Internship – Excelerate

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Tool Utilization Analysis

Purpose: To figure out where and how these tools can actually be used inside Excelerate – whether it's courses, competitions, internships, or events.

Tool 1: Perplexity AI

Excelerate Opportunity	How to Use It (Integration Idea)	Expected Impact
Courses	Use Perplexity to build AI-powered learning assistants for each module. These assistants can answer questions in real-time and explain complex topics in simple terms.	Makes learning feel more personal and interactive. Students get instant clarity on doubts.
Competitions	Let Perplexity help create question banks or research-based quiz prompts using up-to-date data.	Saves mentors time and makes competitions smarter and fresher.
Internships	Interns can use Perplexity to speed up research work or get content summaries. Perfect for prompt writing, report generation, or quick fact-checking.	Boosts productivity. Helps interns learn faster.

Tool 2: LLaMA 3 (Meta)

Excelerate Opportunity	How to Use It (Integration Idea)	Expected Impact
Courses	Use LLaMA 3 to personalize learning content – create dynamic lesson plans depending on student interests or behavior.	Gives every learner a unique experience. Feels more tailored.
Events	Power a virtual event chatbot to answer common event-related questions (timings, sessions, speaker bios, etc.).	Reduces manual support. Makes event experience smoother for attendees.
Internships	Assign LLaMA 3 to help with long-form content writing like project reports, storyboarding, or whitepapers.	Helps interns write better and faster. Less manual writing load.

Tool Utilization Analysis

Tool 3: Gemini (Google)

Excelerate Opportunity	How to Use It (Integration Idea)	Expected Impact
Courses	Embed Gemini to create visually engaging summaries, lesson walkthroughs, and even AI-generated explanations using charts and diagrams.	Students absorb more in less time. Great for visual learners.
Events	Use Gemini's real-time AI capabilities to generate session summaries or highlight key discussion points while an event is happening.	Makes events more memorable. Saves manual note-taking time.
Competitions	Use Gemini for brainstorming and creative content generation (like team slogans, presentations, creative prompts).	Helps students explore new ideas fast. Encourages creativity.

Overall Summary

Tool	Best Fit Area	Why It Works
Perplexity AI	Courses & Internships	Fast answers, factual support, research summaries
LLaMA 3	Events & Courses	Strong at customizing and structuring content
Gemini	Competitions & Live Events	Real-time creativity + visuals = power combo

Conclusion

After carefully mapping each AI tool to different learning and engagement opportunities at Excelerate, it's clear that these tools can bring **real improvements** when used the right way.

- **Perplexity AI** is perfect for research-based tasks in **courses and projects**. Learners can use it to gather accurate background info or get fast summaries, making classes more interactive and time-efficient.
- **LLaMA 3** may need more setup, but it's a strong fit for **internships or advanced modules**. It can generate customized feedback, helping mentors track progress and guide students better.
- **Gemini** shines in **live sessions, competitions, and events**. It's quick, user-friendly, and works great with Google tools to boost participation using live Q&A, content creation, and real-time feedback. Each tool supports different parts Excelerate's system, but together they form a strong tech backbone to **boost engagement, simplify content creation, and personalize learning**.

Purpose: To check if these tools can actually fit into Excelerate's system, both technically and practically.

We're going to look at:

- Is the tool compatible with Excelerate's platforms (like Moodle, Engage)?
- What setup, training, or resources are needed?
- Are there any barriers or issues?
- Can we solve those problems?

Tool 1: Perplexity AI

Criteria	Details
Compatibility	High — Perplexity AI is web-based and simple to integrate with LMS (like Moodle) using APIs or embedded links. Doesn't require heavy technical setup.
Operational Requirements	Minimal — Just a short training session needed to show interns or learners how to ask better questions and use it responsibly.
Barriers	Cost barrier if used in high volume (API access or premium plans); Also needs human check on factual accuracy.
Solutions	Use the free web version for most learners; Train users to verify high-stakes info using trusted sources. Great as a research buddy, not a final answer.

Tool 2: LLaMA 3

Criteria	Details
Compatibility	Moderate — Since LLaMA 3 is usually accessed through third-party platforms (like Hugging Face or private deployments), full setup may require developer help.
Operational Requirements	Teachers may need a walkthrough or preset templates to use it effectively.
Barriers	Time and tech support needed to train users or build custom modules; deployment may be complex.
Solutions	Provide step-by-step prompt templates; Assign a tech support point person during early rollout phase; Use only in pilot mode at first.

Tool 3: Gemini (Google)

Criteria	Details
Compatibility	High – Gemini is already designed to sync easily with Google Workspace tools (Docs, Slides, etc.), which many teams already use.
Operational Requirements	Low – Anyone familiar with Google tools can start using Gemini right away. No coding needed.
Barriers	Data privacy concerns if sensitive content is handled by AI. May need approval or secure settings.
Solutions	Enable account-based access with proper settings; Avoid uploading confidential data; Use in open content projects (presentations, public reports, etc.).

Overall Summary

Tool	Compatibility	Operational Effort	Main Barrier	Quick Fix
Perplexity AI	High	Low	Limited fact-checking, cost at scale	Use free version + basic training
LLaMA 3	Moderate	Medium	Needs tech support + setup time	Start small with pilot modules
Gemini	High	Very Low	Privacy settings	Use for public-facing content only

Conclusion:

All three tools are feasible for Excelerate, but we should start with Gemini and Perplexity AI for easy wins. LLaMA 3 is powerful, but better for small pilot runs or use with tech-savvy mentors or advanced interns.

Here's how we suggest using the tools (Perplexity AI, LLaMA 3, and Gemini) across 4 major areas:

1. Content Creation Enhancements

Goal: Make learning content more engaging and easier to produce.

Tool	Usage
Gemini	Use Gemini to draft lesson outlines, slide content, and infographics. It's quick, understands tone, and connects well with Google Docs and Slides.
Perplexity AI	Great for writing knowledge-rich content like reading material or background explainer sections – especially for science, tech, or business topics.
LLaMA 3	Use LLaMA 3 to generate deeper, analytical content – for example, thought-provoking case studies or research-based summaries. Best when learners are expected to think critically.

Impact: Reduces the time it takes to create content by almost 40%, while making lessons more interactive and personalized.

2. Engagement Strategies

Goal: Make learning fun, rewarding, and socially engaging.

Tool	Usage
Gemini	Use Gemini to power live sessions with fun elements like real-time Q&A, on-the-spot quizzes, and collaborative writing tasks.
LLaMA 3	Generate personalized prompts for activities or reflection exercises. These can push students to think deeply and engage beyond surface-level learning.
Perplexity AI	Use it for quiz generation, where it prepares short assessments based on uploaded learning material – useful for recap sessions or competitions.

Extra idea: Introduce badge-based rewards for completing AI-powered challenges (like beating the bot in a quiz or improving a weak prompt).

3. Analytics for Personalization

Goal: Use data and AI insights to adapt learning to each user.

Tool	Usage
LLaMA 3	With a bit of setup, it can generate custom feedback based on how learners interact with content or answer prompts.
Gemini	Gemini can track writing styles, tone, and prompt clarity – helping instructors guide learners in improving their communication.
Perplexity AI	While not deeply analytical, it can help analyze content trends or summarize learner discussion forums to identify learning gaps.

Impact: These strategies help deliver personalized learning experiences and boost course completion and satisfaction.

4. Workflow Optimization

Goal: Save time and reduce routine work for teachers and mentors.

Tool	Usage
Gemini	Auto-draft emails, announcements, session reminders – directly from Google Workspace.
Perplexity AI	Quickly summarize long documents or reports (e.g., end-of-week submissions) so instructors can focus on mentoring, not reading.
LLaMA 3	Set up automation scripts (with a little dev help) to flag weak prompts or suggest better ones for students during practice sessions.

Impact: Frees up a lot of mentor/instructor time – energy that can now go toward deeper teaching or 1-on-1 student support.

Overall Summary

Area	Tool	Key Benefit
Content Creation	Gemini, Perplexity	Faster content development with quality
Engagement	Gemini, LLaMA 3	Real-time participation + deeper thinking
Personalization	LLaMA 3, Gemini	Adapts to each learner's needs
Workflow	All tools	Saves Time ,reduces repetitive work

Implementation Plan

Turning all our ideas into real, trackable steps!

What's This Plan For?

This section gives a **clear roadmap** of **how** and **when** Excelerate can actually start using the tools (Perplexity AI, LLaMA 3, and Gemini) to:

- Improve content creation
- Boost learner engagement
- Personalize learning
- Save instructors' time

It includes a **timeline**, **milestones**, and **who's responsible** for what.

Phase-wise Timeline

Phase	Duration	Key Focus	Responsible Team
Phase 1: Setup & Trial	Week 1	Tool access, trial usage, basic training	Tech & Content Team
Phase 2: Content Creation Pilot	Week 2	Use Gemini + Perplexity for one course	Content Team
Phase 3: Engagement Tools Testing	Week 3	Launch LLaMA 3-based personalized prompts and quizzes	Mentors & Program Coordinators
Phase 4: Analytics & Workflow	Week 4	Enable Perplexity summaries, automate reports, feedback testing	Analytics & Mentoring Team
Phase 5: Review & Scale	Week 5	Collect feedback, revise approach, roll out in more courses	Strategy & Program Heads

Responsibilities & Team Roles

Team/Role	Responsibility
Content Creators	Use Gemini and Perplexity for module drafting, visual content
Mentors/Instructors	Test AI prompts, quizzes, engagement tools from LLaMA 3

Implementation Plan

Team/Role	Responsibility
Tech Team	Handle integrations (e.g., into LMS), permissions, and data handling
Intern Management Team	Track tool adoption in internships and gather performance data
Strategy & Leadership	Monitor outcomes and decide future scale-up or tool change

Milestones to Track Progress

Week	Milestone	Success Indicator
Week 1	All tools installed and tested	Everyone can log in + test prompts
Week 2	Gemini used for one full course module	Content created 40% faster
Week 3	Quizzes + Q&A session integrated using LLaMA 3	2x more student participation
Week 4	Reports automated with Perplexity summaries	Mentor review time reduced
Week 5	Feedback review and full roadmap finalized	Decision on scale-up or tool swap

Risks & Backups

Risk	Solution
Tools don't integrate with Excelerate's platform	Use browser-based tools + export/import workflow
Mentors/students feel overwhelmed	Run small pilot groups first, then scale
Data privacy concerns	Avoid storing personal data; keep logs secure and reviewed

Final Note: Why This Plan Works

This plan is **realistic, low-cost**, and focuses on **speed, creativity, and participation** — which are exactly the goals of Excelerate.

Each tool is used where it shines best:

- Gemini for creative content
- Perplexity for smart research and summarization
- LLaMA 3 for deep-thinking and personalization