



## Evaluating AI Translation for Global Entrepreneurship Education: A Stakeholder Flourishing Approach

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Autonnette McLaughlin, John Mulford, and Jason Benedict

*Regent University*

*Roundtable: Artificial Intelligence*

### Abstract

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Organizations implementing artificial intelligence (AI) for educational expansion face competing priorities between technical optimization and stakeholder impact. We examined how the principles outlined in John 10:10 inform AI implementation decisions aimed at fostering stakeholder flourishing. John 10:10's principle of an abundant life provides practical decision criteria: Does this technology benefit stakeholders or promote institutional efficiency? We examined AI translation evaluation for a global entrepreneurship education platform that is expanding beyond English-speaking markets. The analysis included professional consultations, manual testing, and evaluation across three solution categories: professional translation services, DIY/manual translation solutions, and browser extension solutions. The analysis built on a literature review of AI implementations, as documented in Harvard Business Review and MIT studies, to inform the stakeholder-centered approach. The analysis compared stakeholder-focused criteria with technical optimization approaches, identifying where principles of abundant life influence accessibility choices over automation and efficiency. Results demonstrate associations between the principles of abundant life and stakeholder flourishing through expanded access (Mayer et al., 2025), resource preservation, and multistakeholder consideration. The abundant life approach led to recommending immediate student-controlled translation access instead of waiting to implement institutional automation solutions. The chosen strategic option enables validating student demand before making a resource investment. This research presents a methodology for integrating biblical principles into AI implementation, offering insights into humanistic technology stewardship.

*Keywords:* artificial intelligence (AI), stakeholder flourishing, native artificial tongue

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## Introduction

The globalization of online education requires institutional leaders to assess translation technologies to deliver multilingual content. In this Phase One study, we examine the technical feasibility of translation solutions for a virtual business development center using the Thinkific (2012) learning management system (LMS). Zhu et al. (2024) reported that artificial intelligence (AI) integration drives innovation, value creation, and user centrality. The virtual business development center could achieve a similar transformation (Ee, 2025; Hughes, 2024) by implementing translation services. We evaluate whether technologies meet both technical requirements and stakeholder flourishing criteria (Israeli & Ascarza, 2025). We ground stakeholder flourishing in the principles of an abundant life, as outlined in John 10:10, using these principles to inform decision-making criteria beyond technical optimization. The research question is, does this technology benefit stakeholders or promote institutional efficiency? To answer this question (Hoque, 2025), we assess whether translation of course content is technically and operationally feasible within the existing LMS infrastructure constraints. We evaluate multiple solution categories based on their implementation requirements, cost, and scalability. At the same time, we prioritize student access, educator workflow preservation, and administrative feasibility.

Translation technology ranges from professional translation services with deep platform integration to student-activated browser extension solutions that utilize existing infrastructure. Between these are semi-automatic document processing solutions and manual translation workflows, each with different time investments, quality control mechanisms, and maintenance requirements. Educational administrators must match solution capabilities (Weill et al., 2024) to organizational constraints, using criteria addressing both stakeholders and institutional efficiency.

In this assessment, we conducted vendor consultations, beta-tested the course content, and compared nine translation technologies. We prioritized hands-on technical validation over vendor marketing claims because we encountered implementation barriers during deployment, not during sales presentations. We focused on identifying 'blockers' – technical requirements that prevent solution deployment, regardless of other favorable characteristics. We evaluated how different solutions affect students seeking course access, educators maintaining pedagogical quality (Vistatec, 2024), and administrators managing implementation.

## Literature Review

### Translation Technology in Educational Contexts

Translation technologies within LMSs have received little attention in the educational technology literature. Machine translation quality has improved with the use of neural network architectures (Gordon, 2024; Johnson et al., 2017). Still, the integration of LMS introduces platform-specific constraints that research in translation studies does not address.

The evolution from rule-based statistical to neural machine translation (Gordon, 2024) reflects 'emergent theory' development, where research questions evolve into strategies (Eisenhardt, 1989; Mintzberg, 1978). Current AI translation uses large language models to achieve fluency, control terminology, and estimate quality (Vistatec, 2024). The shift toward personalization enhances context understanding from software, documents, and course content (Wharton, 2024a; Wharton, 2024b). AI translation differs from traditional machine translation in that it achieves a level of fluency and contextual awareness almost on par with that of humans (Läubli et al., 2018). Deep learning models enable continuous learning and improvement cycles that conventional statistical models cannot reach.

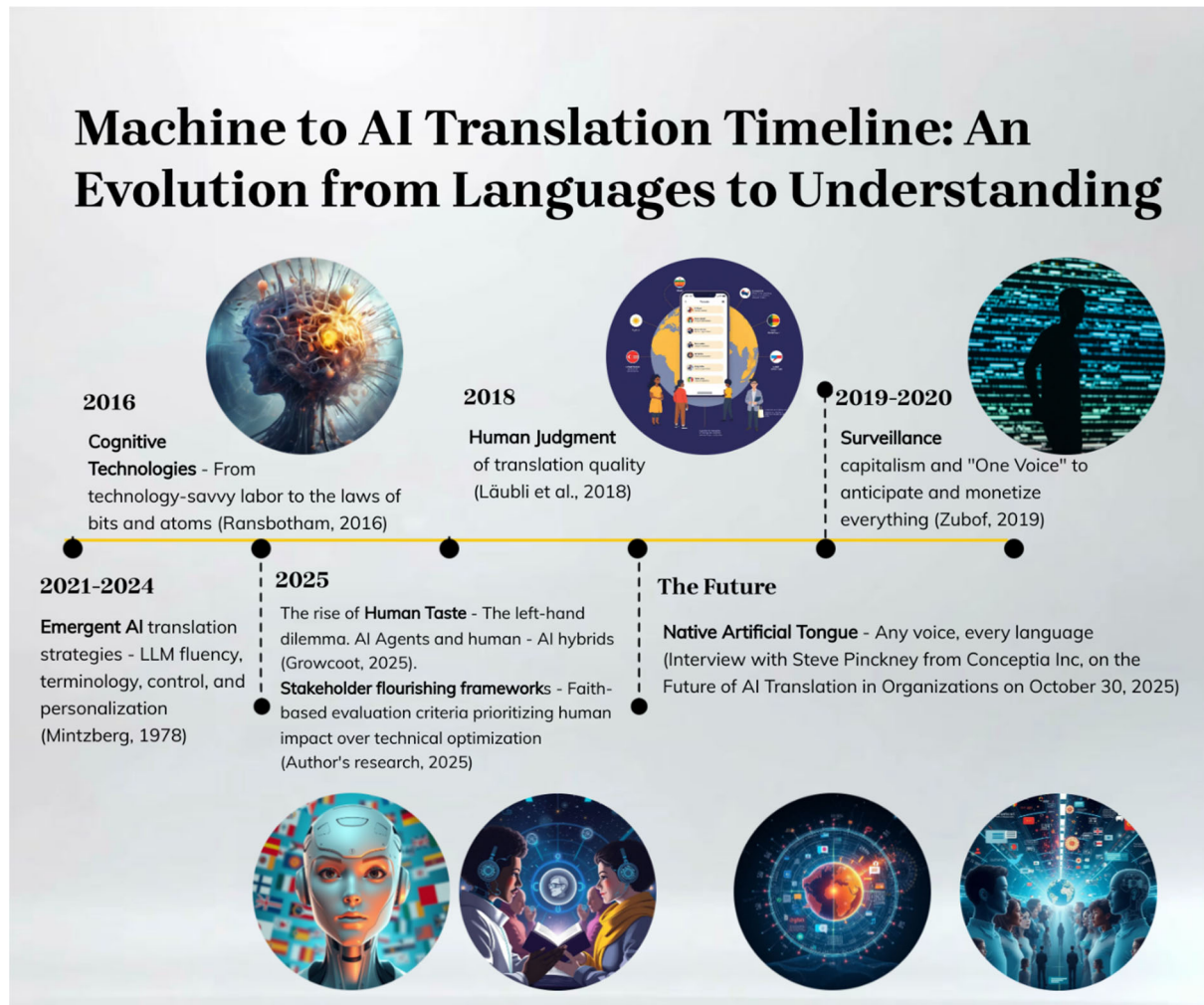
Multilingual content delivery for education differs from general web translation. Course materials include specialized terminology, embedded multimedia content, and structured learning sequences requiring contextual coherence across translated materials (Garcia & Wei, 2015). Translation quality (Vistatec, 2024) significantly impacts comprehension and encompasses cultural adaptation and disciplinary discourse conventions (Drucker, 2002; Rudko et al., 2021).

Figure 1 illustrates the evolution of AI translation from 2016 to the present, highlighting key shifts in technology capabilities (Kuhn, 2012) and implementation concerns. In 2016, researchers prioritized computational efficiency and technical optimization in machine translation development (Mitchell, 2016). Between 2016 and 2018, developers advanced translation from rule-based to statistical to neural machine translation. Researchers achieved fluency, control over terminology, and quality estimation capabilities using large language models (Vistatec, 2024). Developers moved translation from literal word replacement to contextual understanding through deep learning architectures.

By 2018, research incorporated human judgment (Läubli et al., 2018) for translation quality assessment. This trigger marked a shift (Kuhn, 2012) from purely technical metrics to human-centered evaluation. In 2019–2020, Zuboff (2019) documented concerns about surveillance capitalism and data monetization. In the field of translation

services, scholars question whose interests AI deployment benefits (Kiptanui et al., 2025; Zuboff, 2019).

**Figure 1: Machine-to-AI Translation Timeline**



*Note. AI translation has evolved from technical optimization (2016) to the integration of human judgment (2018), concerns about surveillance capitalism (2019-2020), and is now centered on current stakeholder frameworks (Growcoot, 2025; Ransbotham, 2016). We conducted this Phase One assessment within the evolving landscape. We applied the principles of abundant life to evaluate whether translation technology benefits stakeholders or promotes institutional efficiency.*

Current 2025 developments examine human-AI collaboration models where translation decisions involve both automated capabilities and human judgment (Growcoot, 2025). This trajectory points toward shared wisdom (Pentland, 2025). Human-AI hybrids will combine the speed of automated processing with human contextual judgment. Neither

humans nor AI alone produce optimal translation outcomes. Effective translation requires human contributions of cultural understanding, contextual accuracy, and stakeholder awareness, while AI provides processing speed, consistency, and scalability. Industry leaders anticipate continued evolution. Samik Chatterjee, Head of IT Hardware and Networking Equipment research team at JP Morgan (JP Morgan, 2024), suggested that AI will "focus on local inferencing to enable low latency and personalized experiences, while also leveraging more complex audio and visual interactions such as gesture and facial recognition (Bojinov, Laakhani, & Lane, 2025)." These capabilities suggest translation technology will become increasingly personalized and multimodal. For translation implementation, researchers and practitioners address questions about quality control (Vistatec, 2024), cultural adaptation, and stakeholder access rather than pursuing full automation. Surveillance capitalism concerns prompted the deployment of alternative evaluation criteria, such as faith-based stakeholder flourishing approaches, that prioritize human impact over data extraction.

We conducted this Phase One technical assessment within this evolving landscape. AI translation capabilities now require human-centered evaluation criteria, so we applied stakeholder flourishing criteria. We used the abundant life principle as one approach to human-AI hybrid decision making (Snowden & Boone, 2007). We examined whether technology benefits stakeholders rather than only institutional efficiency. Universal language accessibility ultimately means everyone can understand everyone else in real time (Interview with Steve Pinckney from Conceptia Inc., on the Future of AI Translation in Organizations, 2025). Organizational leaders must implement frameworks prioritizing equitable access and technical capabilities to achieve this goal.

## **LMS Platform Architecture and Integration Constraints**

Learning management platforms require different approaches to integrating third-party services. Each approach impacts the implementation of translation solutions. For example, JavaScript-based integration methods initiate automatic content detection and real-time translation but require site administrator access for implementation (Localize, 2010; MotionPoint, 2000; Weglot, 2016). DNS-level proxy configurations trigger automation, but they conflict with the standard subdomain hosting arrangements in multitenant architecture (Burns & Stalker, 1961; Thinkific, 2012). Multitenant architecture (Azouzi et al., 2018; Burns & Stalker, 1961) refers to a software instance that serves multiple customers sharing the same infrastructure and resources. This process prevents users from accessing site-level configurations.

The Thinkific (2012) platform has limited native international support, making translation and external integration a challenge rather than a platform-native feature. This limitation requires implementers to determine which platform services are compatible within the Thinkific (2012) platform constraints.

## Decision Making Under Demand Uncertainty

Technology investment decisions (Snowden & Boone, 2007) create recurring challenges in educational innovation. The "build it and they will come" approach often results in resource misallocation when anticipated demand fails to materialize (Rogers, 2003). Organizational leaders can test translation demand by using lean validation approaches. The process involves validating market demand with minimal investment and reducing resource-allocation risk. Market validation literature distinguishes between technical feasibility – whether a solution is possible – and market viability – whether sufficient demand justifies the implementation costs (Ries, 2011). The educational context adds complexity through mission-given imperatives for accessibility that may justify investment without strong revenue projections.

## Stakeholder Centered AI Implementation

Zuboff (2019) documented how surveillance capitalism extracts value from users. Her research prompted questions about who benefits from AI deployment and whose interests technology benefits. For this reason, researchers sought alternative evaluation approaches prioritizing human impact over institutional efficiency.

Hogue (2025) posited that frameworks are part of the fundamental shifts helping emerging and aspiring entrepreneurs operate and create value for themselves and society, particularly when balancing AI innovation and risk. This need for decision-making frameworks applies broadly across organizational contexts, including educational institutions implementing AI translation. Clardy and Liang (2023) addressed Christian business decisions through behavioral economics, examining innovation and human flourishing through entrepreneurial stewardship principles. They defined entrepreneurship as a venture of faith and profitable to humankind. They argued that every decision requires stakeholder consideration. Faith-based approaches acknowledge the tensions between technological advancements and human values.

Christian theology grounds human flourishing in the cultural mandate. Humanity's calling includes co-ruling and co-loving what God created. Rhodes et al. (2018) explained, "because people are made in the image of a creating and creative God, we are called to (1) preserve and protect the natural world and (2) create culture and economic flourishing by stewarding the natural world" (p. 35). This cultural mandate provides a theological foundation for economic lives. God wants and requires people to work to bring out the world's unexploited potential as part of their vocation.

The cultural mandate applies to technology stewardship decisions. When organizational leaders implement AI translation, they either fulfill the mandate by serving human flourishing or violate it by serving only institutional efficiency. The Holy Spirit creates connectivity and harmony within communities, which education

and communication technology can serve. Kiptanui Nelsonrop (2025) noted that "AI is neither inherently good nor inherently evil. It reflects its makers. For Christians, the challenge is to shape this technology with wisdom, compassion, and reverence for God's design."

John 10:10 principles of abundant life, "I have come that they may have life, and have it abundantly, provides practical decision criteria for technology evaluation. This principle translates to implementation questions: Does this technology primarily benefit institutional efficiency? The Abundant Life Framework prioritizes stakeholder outcomes over operational automation, examining how solutions affect students seeking access, educators maintaining quality, and administrators managing resources.

Blanchard and Hodges (2005) described ego-driven decision making as "edging God out," resulting in fear-based rather than stewardship-based choices. Leaders who make technology decisions from fear of falling behind or pride in automation capabilities make different choices than those who prioritize stakeholder flourishing. Belcic and Stryker (2025) cautioned organizations against FOMO-driven AI adoption, where leaders adopt technology (Selten & Klievink, 2024) because competitors are implementing it rather than because stakeholders need it. Abundant life principles counter this pressure by focusing evaluation on stakeholder flourishing rather than industry trends or competitive anxiety.

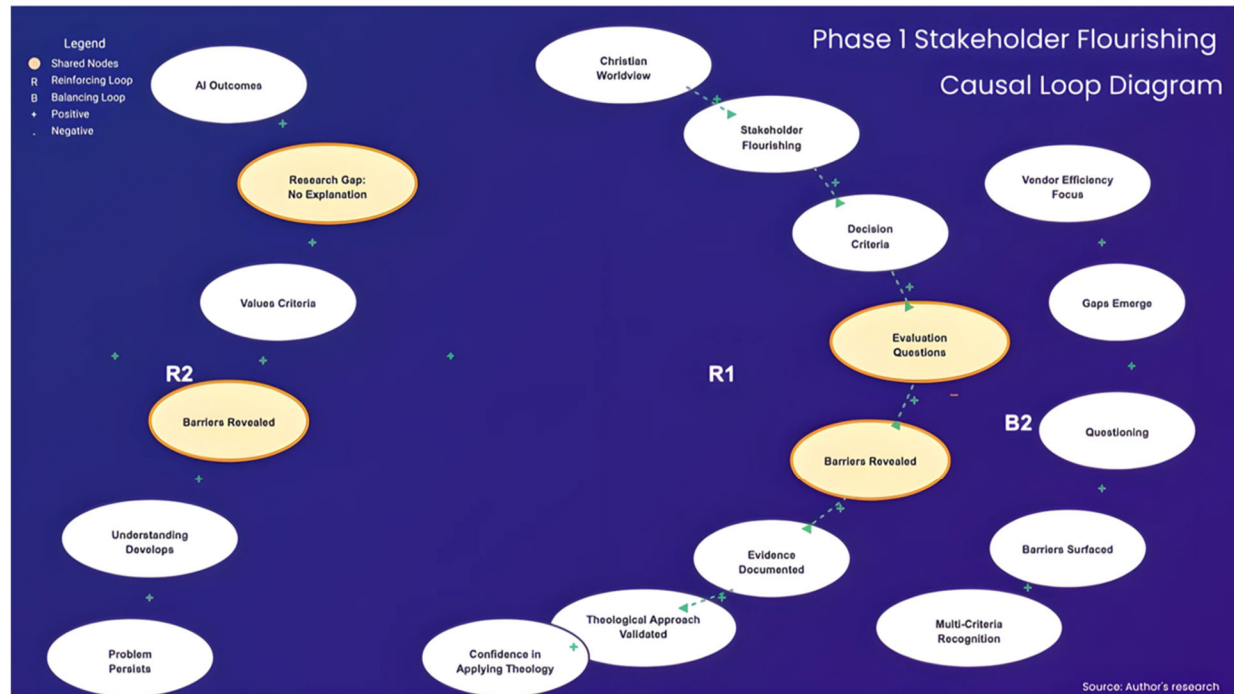
Figure 2 illustrates the dynamic relationships between Christian values and organizational decision-making environments. We trace how Christian worldview principles (R1) generate stakeholder-centered evaluation criteria that reveal implementation barriers. We observe how AI implementation challenges drive continued research (R2), while the efficiency-focused approaches face accessibility constraints (B2). We use these interconnected feedback loops as the theoretical foundation for stakeholder flourishing evaluation.

## **Faith and Innovation**

### **Faith Begins With Christ**

Christians center their faith on belief in Jesus Christ and adherence to His promises. In this research, we use faith-based principles to examine AI translation technologies. The scriptures are a living guide through John 3:16 that describes our relationship with Christ and the covenant between the visible and invisible realms. Through our faith, we affirm this covenant, calling us to embrace change rather than resist it. The developers continue advancing AI capabilities that alter communication, perception, and human interaction in ways we cannot fully anticipate or control. This rapid technological evolution creates uncertainty for entrepreneurs seeking to build sustainable businesses.



**Figure 2: Phase 1 Stakeholder Flourishing**

*Note. In Loop R1, we observe how applying Christian worldview principles prioritizes stakeholder flourishing. Using the system's language, our observations confirm that the more the Christian worldview informs decisions, the more stakeholder flourishing is prioritized. The more stakeholder flourishing is prioritized, the more decision criteria emerge. The more decision criteria emerge, the more evaluation questions are developed. The more evaluation questions are developed, the more barriers are revealed. The more barriers are revealed, the more evidence is documented. The more evidence is documented, the more the theological approach is validated as practical. In loop R2, we observe how AI implementation problems persist throughout the research cycle. In loop B2, we observe how leaders encounter accessibility constraints when pursuing efficiency-only approaches. This Phase One assessment applied these principles to the*

Entrepreneurs already faced significant challenges launching and sustaining businesses. When language barriers compound these difficulties, the challenges intensify. Neubert (2013) noted that supporting a family through entrepreneurship creates overwhelming pressure. Believers in Jesus Christ understand that God is the source of provision. Starting a business, growing it, building a legacy, and sharing it requires faith at every stage. Stakeholder flourishing becomes vital to entrepreneurial learning and entrepreneurship education. When we prioritize removing barriers to access, we enable global participation in entrepreneurship development.



## **Pride and Fear**

Ego-driven responses manifest when individuals face disruption. Pride and fear shape reactions to technological advancements, including the implementation of AI.

According to Blanchard and Hodges (2005), "ego problems" occur when individuals "edge God out" as their source of worth, security, and primary audience, creating two distinct patterns of dysfunction. John 3:16 is a passage of written guidance that helps leaders respond to change, submitting circumstances to God's authority rather than reacting out of ego. The current discourse around AI reflects both advocacy and opposition, often rooted in concerns about economic security and livelihood (Barnhart, 2023; Locke, 2024).

## **The Duality**

Christian theology and scientific advancement create ongoing tensions in practice. The Christian Mandate to "make disciples of all nations" (Matt. 28:19) requires both innovation and resources, raising questions about exploration boundaries and application ethics (Barnhart & Turner, 2024; Locke, 2024). Responses to these questions vary across Christian communities. Kiptanuinelsonrop (2025) stated, "Artificial intelligence is not inherently good or evil. It reflects its makers. For Christians, the challenge is to shape this technology with the wisdom, compassion, and reverence for God's design." This perspective frames technology as a tool rather than an autonomous force, placing responsibility on users to align implementation with biblical principles.

## **Methodology**

### **Research Design**

In this Phase One study, we employed a systematic technical feasibility assessment examining translation technologies for the Regent Center for Entrepreneurship Virtual Business Development Center (RCE). The platform operates on Thinkific's (2012) LMS. We evaluated expansion capabilities beyond English-speaking markets. The assessment prioritized identifying technically viable solutions while applying stakeholder flourishing criteria to implementation decisions.

The research evaluated nine translation vendors across three solution categories: professional translation services, DIY/manual translation solutions, and browser extension solutions. The evaluation criteria incorporated both traditional technical criteria and stakeholder-centered considerations derived from the principles of an abundant life, as outlined in John 10:10.

## Solution Categories

Professional translation services included vendors offering a comprehensive platform integration through JavaScript implementation or DNS-level proxy configurations. The sales representatives promised that these solutions would automate real-time content translation with minimal ongoing maintenance. We evaluated three vendors: Weglot (2016), Localize (2010), and MotionPoint (2000). Students using browser extension solutions control translation activation. These solutions have minimal institutional infrastructure requirements. We evaluated accessibility, user experience, and implementation simplicity through hands-on testing with course materials.

## Evaluation Criteria

We assessed each solution category using dual evaluation criteria. We used technical feasibility criteria to evaluate implementation requirements and performance characteristics. For stakeholder flourishing criteria, we measured the impact on students, educators, and administrators. Technical feasibility criteria included the following:

- Platform compatibility with Thinkific (2012) infrastructure
- Implementation requirements (site administrative access, DNS configuration, JavaScript integration)
- Set-up time and complexity translation accuracy for entrepreneurship terminology performance with embedded multimedia content
- Cost structures (subscription fees, per-wording price, and implementation costs)
- Ongoing maintenance requirements

Stakeholder flourishing criteria derived from abundant life principles, included the following:

- Student accessibility (bandwidth requirements, device compatibility, user control)
- Educator workflow preservation (time and investment, quality controller mechanism, content management)
- Administrative feasibility (infrastructure requirements, resource investment, reversibility)
- Equitable access considerations (zero-cost options, infrastructure-light solutions)

For each solution, the stakeholder flourishing principles asked: Does this technology primarily benefit stakeholders, or does it primarily benefit institutional efficiency? This question informed the weight of technical capabilities in the final recommendations.

## Data Collection Methods

We conducted professional consultations through vendor sales meetings. MotionPoint (2000) has enterprise-level translation capabilities, implementation requirements, and pricing structures. Likewise, Localize (2010) has JavaScript-based integration methods and automation features.

Technical support staff provided details on the implementation requirements that were not available in the marketing materials. Weglot (2016) supports correspondence-addressed DNS configuration requirements and JavaScript integration specifications. Thinkific (2012) supports correspondence-confirmed platform limitations regarding site administrator access and third-party integration capabilities.

We used beta testing protocols to include RCE course content across all solution categories. Testing measured translation time, quality assessment for entrepreneurship terminology, multimedia content handling, and user experience factors. Performance testing focused on identifying implementation blockers, which included technical requirements that prevented deployment, regardless of other favorable characteristics.

## Comparative Analysis

We compared the trade-offs between automation capabilities and implementation barriers. Our analysis prioritized solutions that enable immediate student access over those requiring extended infrastructure development timelines. Students seeking translated content only benefit from solutions we can actually deploy.

## Analysis Approach

We analyzed how traditional efficiency-focused evaluation would rank solutions compared with how stakeholder flourishing criteria would influence rankings. For each solution category, we documented the following:

- Technical capabilities and limitations
- Implementation blockers
- Stakeholder impact for students, educators, and administrators
- Alignment with the abundant life principles, prioritizing access over automation

Applying this dual evaluation approach revealed where stakeholder flourishing material led to different implementation recommendations than would pure technical optimization.

## Findings

### Professional Translation Services

We tested professional translation services through beta evaluation. These services have comprehensive translation capabilities with minimum ongoing maintenance. Weglot (2016) and Localize (2010) have superior automation features, including automatic content detection, real-time translation across multiple languages, and translation of end-user interface elements. The set-up process for both services takes approximately 15 minutes, including site administrator access.

**Implementation Barriers.** All professional translation services require site administrator access for JavaScript integration or DNS-level proxy configuration. Thinkific (2012) operates using multitenant architecture – one software instance serving multiple schools that share infrastructure (Azouzi et al., 2018). This shared hosting arrangement prevents users from accessing site administrator controls or modifying DNS configurations. We could not deploy JavaScript integration or DNS-based translation services due to these platform constraints.

**Cost Structure.** Professional translation services have monthly subscription fees ranging from \$20 to \$40, with per-language pricing tiers. MotionPoint's (2000) enterprise-level solutions start at significantly higher price points with customer implementation support. These price points represent ongoing expenses.

### Stakeholder Impact Analysis.

- Students would experience seamless translations across all course elements without additional actions.
- Educators would maintain the current workflow without translation management responsibilities.
- Administrators cannot overlook platform access limitations despite a favorable cost-benefit analysis.

**Abundant Life Framework Application.** Vendors design professional translation services for institutional efficiency with minimal maintenance requirements once implemented. However, we were unable to deploy them due to platform barriers. The site administrator's access blocker prevented stakeholders from benefiting from these capabilities. We used the principles of abundance to prioritize deployable solutions over technically superior but unimplementable options.

## DIY/Manual Translation Solutions

We tested manual translation options using professional tools. Time requirements varied based on content type and desired quality levels. We evaluated both document-level translation for static materials and comprehensive lesson translation, including interactive elements.

**Document Translation Performance.** We tested DeepL (2021) with a 12-page PDF document with embedded graphics and charts. The processing time was 25 seconds, demonstrating efficiency for downloadable course materials. Entrepreneurship terminology is translated with contextual accuracy across business concepts.

**Comprehensive Lesson Translation.** We found that translating complete lessons, including interactive elements, embedded videos (Microsoft, 2018; Microsoft, 2024; Tolle, 2012), and discussion prompts, required 3 to 6 hours per lesson, depending on the multimedia content complexity. We spent time on translation generation, quality review, terminology consistency, and content reformatting.

**Cost Structure.** Manual solutions have zero subscription costs, though labor investment is significant. DeepL (2021) has free tiers for document translation, along with premium features at lower prices than professional translation services (Forbes Talks, 2025). Organizational leaders choosing manual solutions trade subscription fees for staff time investment.

### Stakeholder Impact Analysis.

- Students access professionally translated content after manual translation completion with high-quality control.
- Educators manage translation workflows, quality review processes, and content updates across multiple language versions.
- Administrators could implement immediately without making infrastructure changes, but required a budget allocation for translation labor costs.

**Abundant Life Framework Application.** We achieved high-quality translations that could benefit students' comprehension needs. However, the requirement of 3 to 6 hours per lesson prevented rapid course expansion and significantly increased educators' workload. We applied the principles of abundant life to evaluate this trade-off. Does this time investment benefit stakeholder flourishing or create unsustainable workloads for educators? We identified document-level translation for downloadable resources as a viable middle approach. Students would access translated PDFs and handouts while interactive lessons remained in English. This approach preserves educator workflow while expanding student access to key materials.

## Browser Extension Solutions

We could implement Browser Extension Solutions immediately without institutional infrastructure changes. These extensions differ from professional translation services and manual approaches because students control when translation is activated. We tested multiple Browser Extension Solutions, including built-in features in Chrome, Firefox, and Safari, as well as Google Translate (n.d.) extensions.

**Implementation Simplicity.** Students activate browser translation extensions through Chrome, Firefox, Safari, or use third-party extensions such as Google Translate (n.d.). They can access translations immediately without institutional involvement, administrator permissions, or subscription costs. The browser prompts are simple to follow and are helpful when enabling features and extensions. Students with browser skills can activate translation features immediately.

**Translation Quality.** We tested browser translation functionality with course content. Entrepreneurship terminology accuracy varied by language pair. Entrepreneurial concepts were conveyed with sufficient clarity to meet learning objectives, although nuanced business terminologies occasionally required student interpretation.

**Performance Characteristics.** Translation occurs in the student's browser on their device. Speeds depend on the student's device capabilities and internet connectivity (Maphosa & Maphosa, 2023; Shanahan & Bahia, 2025). Students control when translations activate, which context to translate, and can toggle between original English and translation versions. This student-controlled approach allows learners to verify comprehension by comparing the original and translated text.

### Stakeholder Impact Analysis.

- Students gain immediate access to course content and preferred languages with complete control over translation activation and can validate interest in translated content before institutional investment.
- Educators maintain current workflows without translation management and retain English language course materials without version control challenges.
- Administrators can implement immediately at zero cost, enable demand validation before infrastructure investment, and maintain course access reversibility.

**Abundant Life Framework Application.** Students using browser extension solutions can control activation and evaluation on their own terms. This approach benefits stakeholder flourishing by removing barriers to access while preserving institutional resources for deployment after demand validation. The zero-cost, immediate implementation enabled students to access course content immediately rather than

waiting for professional translation services to become technically feasible. Abundant life principles led to recommending solutions that serve current student needs rather than waiting for ideal future automation capabilities.

### Comparative Analysis Summary

Professional translation services have superior technical optimization criteria; however, platform constraints blocked deployment (see Tables 1-3). We found that DIY/manual translations solutions produced high-quality content; however, the 3 to 6 hours required per lesson created an unsustainable increase in educator workload. Browser extension solutions are less technically sophisticated, but students could access content immediately at zero cost while we validate demand. Using the principles of abundant life, we prioritized deployable solutions that serve current stakeholder needs over unimplementable technical capabilities. We chose browser extension solutions for immediate implementation, despite its lower technical sophistication compared to professional translation services.

**Table 1: Translation Technical Feasibility**

Criteria	Professional Translation Services	DIY/Manual Translation Solutions	Browser Extension Solutions
Platform capability	Blocked (site admin. access)	Compatible	Compatible
Set-up time	15 minutes (if feasible)	Immediate	Immediate
Translation time	Real-time automation	25 seconds to 6 hours per lesson	Real-time student side
Ongoing maintenance	Minimal	Significant per update	None

**Table 2: Cost Structure**

Criteria	Professional Translation Services	DIY/Manual Translation Solutions	Browser Extension Solutions
Implementation	\$0 Set-up	\$0 Set-up	\$0 Set-up
Ongoing	\$20-\$40/month	Labor hours	\$0

**Table 3: Stakeholder Flourishing**

Criteria	Professional Translation Services	DIY/Manual Translation Solutions	Browser Extension Solutions
Student access	Would be seamless (if deployable)	Delayed Pending Translation Completion	None
Feasibility	Blocked by platform limitations	Intensive	Feasible
Demand validation	Requires pre-investment	Requires Investment	Enable Validation



Criteria	Professional Translation Services	DIY/Manual Translation Solutions	Browser Extension Solutions
Reversibility	Subscription-based	Content Committed	Instant

## Discussion

### Technical Feasibility Findings

We confirmed through Phase One assessment that translation technologies exist across multiple solution categories with varying technical capabilities. Professional translation services demonstrated superior features but encountered deployment blockers related to platform architecture constraints (Burns & Stalker, 1961). Manual solutions proved technically feasible but required significant time investments per lesson. Browser extensions offered immediate deployment without infrastructure dependencies.

The most significant finding relates to the technical sophistication and its lack of correlation with implementation feasibility. The most technically advanced solutions, professional translation services, could not be deployed through the LMS. On the other hand, the most straightforward solution technically – browser extensions – enabled immediate implementation. This revelation explains how platform constraints can eliminate technically superior options regardless of feature capabilities.

We identified that site administrator access is the critical blocker for professional translation services. Thinkific's (2012) multitenant architecture and limited administrator access prevent JavaScript integration and DNS proxy configuration. This platform constraint eliminated an entire solution category from consideration, despite a favorable cost-benefit analysis and superior automation features (Localize, 2010; MotionPoint, 2000; Weglot, 2016).

### Stakeholder Flourishing Analysis

We applied abundant life principles to translation evaluation and ranked solutions differently than efficiency-focused evaluation would. Traditional efficiency evaluation prioritizes professional translation services for comprehensive automation capabilities and minimal ongoing maintenance. However, we used stakeholder flourishing criteria (Barnhart 2023; Barnhart & Turner, 2024) to prioritize browser extensions despite lower technical sophistication.

The decisive factor was the timing of student access. Professional translation services would require waiting for the LMS changes or migrating to a different LMS infrastructure. Using browser extensions, students accessed content immediately,

serving current stakeholder needs rather than optimizing for future institutional efficiency.

Using abundant life principles, we asked questions that technical criteria did not address:

- Does requiring students to wait for professional translation infrastructure benefit their educational access needs or institutional automation preferences?
- Does placing a 3- to 6-hour workflow burden on educators per lesson affect their capacity to maintain quality instruction?
- Does zero-cost validation protect institutional resources while enabling student access?

We prioritized solutions that removed barriers (Acilar, 2011; Amjad et al., 2024; Autio et al., 2025; Independent Communications Authority of South Africa, 2024; Mpedi et al., 2025; Pierce & Cleary, 2024; Raihan et al., 2024; Smith, 2025; Vesna et al., 2025) to student access, preserved educated workflow capacity, and enabled demand validation before resource commitment. Our analysis uncovered tensions between institutional efficiency optimization and stakeholder flourishing. Professional translation services have comprehensive automation capabilities. Once implemented, maintenance requirements are minimal. However, we could not implement them without overcoming the platform barriers. Prioritizing browser extensions provided students with immediate access, despite the solution's lack of institutional automation sophistication.

### **Phase One Limitations**

We examined technical feasibility without validating student demand. We confirmed that implementation is possible, and we must now determine whether students actually need these capabilities. Technical feasibility does not confirm market viability. We analyzed one LMS platform. Thinkific's (2012) site administrator access constraints may not apply to other LMS platforms. Institutions using Canvas, Blackboard, or Moodle may encounter different technical barriers and have access to different solution categories.

We tested entrepreneurship education content; translation challenges may vary by discipline. Technical terminology, cultural context requirements, and multimedia content characteristics may vary by subject matter. The translation feasibility for entrepreneurship courses may differ from that for science, humanities, or professional certification courses.

Our beta testing scope examined nine vendors but did not exhaustively evaluate all available translation technologies. Additional solutions may exist with different technical specifications or implementation requirements, which could alter the feasibility rankings.

## **Implications for Practice**

Our phased implementation approach applies to cases beyond this specific one. Educational leaders facing similar translation decisions can use this evaluation criteria to assess technical feasibility before investing in infrastructure or professional translation services. The dual criteria approach, which combines technical feasibility with stakeholder flourishing analysis, helps uncover implementation options that a pure efficiency evaluation would overlook.

Zero-cost validation via browser extensions helped us choose a risk mitigation strategy. Institutional leaders can enable student access immediately while collecting usage data, student feedback, and demand indicators. This evidence allows us to make an informed decision on whether investing in professional translation services is justified in Phase Two.

Applying the Abundant Life Framework, we demonstrated how faith-based principles translate to practical implementation decisions. Asking, does this technology benefit stakeholders, or does our institutional efficiency produce different vendor rankings than asking which solution offers the best automation? This framework applies to AI implementation decisions beyond translation, including educational technology, administrative systems, and student services, all of which benefit from stakeholder-centered evaluation criteria.

We identified implementation blockers that prevented waste of vendor evaluation time. Our discovery of site administrator access requirements, following extensive vendor demonstrations and cost negotiations, would have wasted institutional resources. Organizational leaders should identify implementation blockers before evaluating vendors. This approach helps leaders to assess deployable solutions.

## **Conclusion and Recommendations**

### **Phase One Complete Summary**

During the Phase One technical feasibility assessment, we confirmed that translation technologies exist across multiple solution categories with varying implementation requirements. Professional translation services have comprehensive capabilities but encounter platform-specific deployment barriers. DIY/manual translation solutions

often require significant time investment for quality control. Browser extensions have immediate student access without infrastructure dependencies.

We established technical feasibility from multiple approaches. Implementation pathways have been identified for solutions compatible with current platform constraints. Deployment blockers have been identified with solutions that require infrastructure changes exceeding current institutional capabilities.

## Strategic Recommendations

Based on technical feasibility and stakeholder flourishing principles, we recommend a three-option phased implementation strategy. Option 1 enables immediate student access with zero calls while validating demand. Options 2 and 3 depend on Phase Two validation results confirming sustained student need, which justifies additional investment.

**Option 1: Immediate Implementation – Browser Translation Guidance.** We provide students with guidance on browser extensions to access course content in their preferred languages immediately. Students use built-in browser features or free third-party extensions without institutional infrastructure or subscription costs. They control translation timing and content selection. We can gather usage data and student feedback during Phase Two demand validation.

Implementation steps follow:

- Create browser translation set-up instructions for Chrome, Firefox, and Safari
- Distribute guidance through course announcements and welcome materials
- Monitor student use through voluntary feedback and completion rate analysis
- Collect data on language preferences, translation quality perception, and accessibility barriers

We recommend Option 1 because it prioritizes student access over institutional automation. Students seeking translated content gain immediate access rather than waiting for professional translation services to become technically feasible. The zero-cost, immediate implementation approach aligns with abundant life principles and serves current stakeholder needs.

**Option 2: Phased Enhancement – Document Translation.** We add DIY/manual translation solutions, such as DeepL (2021), for downloadable resources after Phase Two validated demand and gather student feedback. DeepL (2021) systems produce higher-quality results for static content while students continue using a browser extension for interactive lessons (Forbes Talks, 2025). This approach balances quality

improvements with manageable time investment, avoiding the unsustainable educator workload of complete lesson translation. Implementation triggers follow:

- You can confirm sustained student demand across specific language populations in Phase Two.
- You receive feedback from the browser extension indicating concerns about document translation quality.
- You discover that students are prioritizing specific downloadable resources.

Option 2 is for decision makers who want to balance quality enhancement with resource investment. Document translation requires limited time investment (25 seconds per PDF through (DeepL, 2021; Forbes Talks, 2025) compared to manual, comprehensive lesson translation (3 to 6 hours per lesson). Decision makers can phase out implementation based on student priorities identified through Phase Two research.

**Option 3: Future Considerations – Professional Translation Services.** We recommended deferring professional translation services until infrastructure investment and sustained demand validation are in place. Translation services, such as Weglot (2016), MotionPoint (2000), and Localize (2010), require custom domain set-up or site administrator access, as well as monthly subscription costs. Implementing these services requires infrastructure updates before deployment.

#### Implementation Prerequisites

- Phase Two confirms sustained multiyear demand, justifying ongoing subscription costs
- Translation platform migration to the LMS supporting site administrative access
- Thinkific (2012) platform updates enabling third-party JavaScript integration
- Budget allocation for \$240 to \$480 annual subscription costs

This option is for decision makers who can implement infrastructure changes before deployment. Using the abundant life principles, decision makers can defer this investment until Phases Two and Three confirm that student demand justifies modifying the infrastructure and the ongoing costs. This approach benefits stakeholder flourishing by preventing premature resource commitment to unvalidated needs.

#### Next Steps

Phase Two student demand validation must occur before finalizing implementation recommendations. Technical feasibility alone does not confirm that students need or will use translation capabilities. Phase Two research requires the following:

- Survey development measuring translation needs across the current student population
- Language preference identification for target markets
- An analysis of whether English proficiency prevents course completion
- Usage data collection from the Option 1 browser extension implementation

The final feasibility determination for Phase Three will integrate the technical findings from Phase One with the demand validation from Phase Two. Integrating both findings and validation helps decision makers determine whether translation expansion benefits the institutional mission and fosters stakeholder flourishing based on actual student needs rather than assumed demand.

The recommendation is to implement Option 1 immediately while conducting Phase Two research. This process enables students to access information now, rather than delaying until demand validation is complete. Students will benefit from the available capabilities while the institution collects evidence to inform future investment decisions.

### **Contribution to Literature**

We illustrated how stakeholder flourishing principles can be applied to technical AI implementation decisions. The abundant life principle has practical decision criteria that help decision makers rank vendors on more than just efficiency optimization. Decision makers can use this methodology beyond translation to other AI implementation contexts, where institutions must balance technical capabilities with stakeholder impact.

In this study, we demonstrated how faith-based principles translate into replicable evaluation criteria accessible to both religious and secular organizations. Asking does this technology benefit stakeholders or institutional efficiency yields stakeholder-centered decisions regardless of the philosophical foundation that motivates the question. For example, secular organizations can use the evaluative question without adopting Christian theology and still arrive at stakeholder-centered implementation decisions.

The Phase One technical feasibility assessment provides a foundation for a staged implementation, thereby reducing risk. Educational institutions can replicate this evaluation approach before investing in infrastructure or professional translation services. We suggest implementation options that the efficiency-first evaluations overlook.

We documented how platform constraints eliminate solution categories regardless of technical sophistication. Professional translation services have superior features and

favorable costs. We were unable to deploy them because they required site administrator access, which the LMS did not provide. Decision makers must evaluate LMS infrastructure compatibility and vendor compatibility.

In this Phase One study, we established the technical feasibility of implementing AI translation. Market viability remains unconfirmed pending Phase Two demand validation. We demonstrated how the phase research approach can assist leaders in making informed decisions under demand uncertainty by separating technical assessment from demand validation, rather than attempting to determine comprehensive feasibility before acting.

AI translation capabilities will continue evolving in ways we cannot fully anticipate (Goorha & Iyengar, 2020; Loucks et al., 2024; PWC, 2025a; PWC, 2025b). The shared wisdom approach combining human judgment with AI capabilities (Burnham, 2025; Creative Intelligence, 2025; Middlebury Institute of International Studies, 2024a; Middlebury Institute of International Studies, 2024b; Middlebury Institute of International Studies, 2024c; Weill et al., 2024) is one path forward. How can entrepreneurship educators and administrators ensure they are ready for the AI transitions yet to come, such as AI agents? This question requires ongoing evaluation using stakeholder flourishing criteria rather than efficiency metrics alone. Applying faith-based frameworks in any organization helps decision makers navigate this uncertainty while keeping human flourishing central.

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### About the Author

Dr. Autonnette McLaughlin holds a Doctor of Strategic Leadership with a concentration in strategic foresight from Regent University and is currently pursuing a Master of Science in Foresight at the University of Houston. She is an executive business mentor with over 20 years of experience partnering with Fortune 500 companies, small businesses, and religious organizations. Her research interests include strategic foresight, entrepreneurial ecosystems, and experiential learning.

Correspondence concerning this article should be addressed to:

[LeadOn@Autonnette.com](mailto:LeadOn@Autonnette.com)

Dr. John Mulford joined Regent University as a founding faculty member in the Business School in 1982. In addition to serving as a professor, he has served as dean of the Business School, chief financial officer and chief investment officer of Regent University, and founder and director of Regent Center for Entrepreneurship. Through the Center, he has pursued his passion for helping entrepreneurs start and grow businesses in dozens of countries, most notably by creating a model for Business Development Centers that has been licensed in nine countries. He has been active in the Christian business movement, serving on the boards of several key organizations,



including Nehemiah Project International Ministries, Fellowship of Companies for Christ International, and C12. Prior to Regent, Dr. Mulford conducted policy research at the Rand Corporation and served as vice president and senior economist at First Interstate Bank of California. He earned the B.S. in Engineering, Magna Cum Laude, from Brown University, and the Ph.D. in Regional Economics from Cornell University, where he was a National Science Foundation Fellow.

Jason Benedict serves as a Strategist for the Regent Center for Entrepreneurship. He and his wife, Kimberly, began working cross-culturally in 1994, and he has had the pleasure of equipping leaders around the world, leading field teams, starting businesses, and developing innovative ways to share the Good News with the nations. Jason is a contributing editor of Momentum Magazine and is the author of Eden Inc.

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