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Validating the Core Elements of a Linguapreneurship Model: Insights from a Fuzzy Delphi Analysis

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ABSTRACT

The emerging intersection of language education and entrepreneurship conceptualized as *linguapreneurship* demands a strong framework to guide curriculum development and policy formulation in alignment with digital transformation and economic innovation. Addressing this critical gap, the present study employs the Fuzzy Delphi Method (FDM) to validate the core components of a proposed Linguapreneurship Model. A diverse expert panel comprising 12 professionals from academia, digital content industries, and educational technology was engaged to evaluate 30 proposed model elements using a linguistic importance scale. Through the application of triangular fuzzy number calculations and defuzzification techniques, expert judgments were synthesized to determine levels of consensus. The analysis revealed that 25 elements met or exceeded the established consensus threshold (defuzzified value ≥ 0.5), indicating strong expert agreement on their significance and relevance. These validated elements span key thematic domains such as artificial intelligence integration, digital language learning platforms, industry-academic partnerships, and innovative linguapreneurial pedagogies. The findings offer an empirically grounded and consensus-based model that advances the theoretical and practical understanding of linguapreneurship. Furthermore, the validated framework provides a strategic foundation for the design and implementation

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of forward-thinking language education programs that are aligned with the competencies required in the digital economy and the broader context of Industry 4.0. By embedding entrepreneurial and technological dimensions into language curricula, this study contributes to the transformation of language education and enhancing its socio-economic impact.

Keywords: Linguapreneurship; Fuzzy Delphi Method; Language Education Innovation; Digital Economy; Industry 4.0

1. Introduction

The combination of language proficiency and entrepreneurial thinking has given rise to the concept of linguapreneurship, wherein language functions not merely as a medium of communication but as an economic asset in the global digital economy. Linguapreneurship reflects the capacity of individuals to leverage linguistic competence for entrepreneurial ventures across domains such as digital content creation, localization, translation, multilingual branding, and educational technology^[1]. This paradigm is increasingly pertinent in an era characterized by artificial intelligence (AI), digital ecosystems, and platform-based economies, where language skills contribute directly to marketable, scalable innovations^[2–4].

Globally, the value of linguapreneurship has gained attention; however, its integration within formal education, particularly in Malaysia, remains limited. Malaysian language programs at the tertiary level predominantly emphasize traditional learning outcomes such as grammar mastery, literary analysis, and cultural literacy. However, they often neglect the development of an entrepreneurial mindset, digital literacy, and industry engagement^[5–7]. This gap between academic curricula and market needs raises serious concerns about language graduates' employability. National policies, including the Malaysia Education Blueprint (Higher Education) 2015–2025 and the National Policy on Industry 4.0, shows the need for fostering innovation, interdisciplinarity, and entrepreneurial capabilities within higher education^[6,8].

In response to this gap, the present study aims to propose and validate a comprehensive Linguapreneurship Model that delineates essential elements for embedding entrepreneurial, digital, and linguistic competencies within language education curricula. The objective is to provide research-based model that informs the design of future-oriented language programs, enabling graduates to transform linguistic proficiency into sustainable economic value.

The validation of this model employs the Fuzzy Del-

phi Method (FDM), an integrative technique that combines the conventional Delphi method with fuzzy set theory to systematically derive expert consensus^[9,10]. FDM is particularly well-suited for examining emergent interdisciplinary constructs such as linguapreneurship, where expert judgments are inherently subjective and context-dependent^[10–12]. By mitigating uncertainty and quantifying agreement, the method ensures that the resulting model elements are both theoretically solid and practically relevant.

2. Background of Study

The rise of the digital economy has fundamentally altered the economic and functional value of language, transforming it from a mere communicative tool into a dynamic asset capable of generating economic opportunities. Linguapreneurship, as an emerging paradigm, encapsulates this shift by integrating linguistic expertise with entrepreneurial strategies, enabling individuals to monetize their language skills in innovative ways^[1]. This concept extends beyond traditional language-related professions such as translation and teaching to encompass emerging fields like AI-driven language technologies, multilingual digital marketing, and globalized e-commerce, where linguistic agility directly influences market success^[2,3]. The increasing reliance on digital platforms and automated language services further amplifies the demand for linguapreneurial competencies, as professionals must navigate both linguistic nuances and technological advancements^[4].

Globally, higher education institutions are gradually recognizing the need to align language programs with entrepreneurial and digital skill development. In Europe and North America, initiatives such as language technology incubators and cross-disciplinary entrepreneurship courses for humanities students reflect a growing emphasis on linguapreneurial training^[1]. However, in many Asian contexts, including Malaysia, language education remains largely anchored in conventional pedagogical approaches, with cur-

ricula emphasizing theoretical linguistics, literary studies, and prescriptive grammar rather than applied, market-driven competencies^[5,7]. This disconnect has led to a mismatch between graduate skill sets and labor market expectations, particularly in industries where multilingualism and digital fluency are key competitive advantages^[6].

Malaysia's policy landscape underscores the urgency of addressing this gap. The Malaysia Education Blueprint (Higher Education) 2015–2025 explicitly advocates for curricula that foster innovation, digital literacy, and entrepreneurial thinking^[8]. Similarly, the National Policy on Industry 4.0 highlights the necessity of preparing graduates for a technology-driven economy, where interdisciplinary skills including the ability to leverage language for business innovation are crucial^[13]. Despite these directives, the integration of linguapreneurship within Malaysian higher education remains nascent, with limited empirical frameworks to guide curriculum redesign^[7].

The absence of a structured model for linguapreneurship education poses a significant challenge. While existing studies highlight the economic potential of language skills in entrepreneurial contexts^[2] there is a lack of consensus on the essential competencies, pedagogical strategies, and industry linkages required to operationalize linguapreneurship in academic settings. This gap necessitates a systematic approach to defining and validating a linguapreneurship framework that integrates linguistic proficiency with entrepreneurial and digital competencies.

To address this, the present study leverages the Fuzzy Delphi Method (FDM), a credible technique for synthesizing expert opinions in fields where conceptual boundaries are fluid and subjective^[10,12]. Unlike traditional Delphi methods, FDM incorporates fuzzy logic to account for the inherent ambiguities in expert judgments, ensuring a more nuanced and reliable consensus^[9]. By applying FDM, this study seeks to derive a validated linguapreneurship Model that can serve as a blueprint for curriculum developers, educators, and policymakers aiming to enhance the employability and entrepreneurial potential of language graduates in Malaysia and beyond.

Hence, this research contributes to the broader discourse on language education reform by providing an empirically grounded framework that bridges linguistic studies, entrepreneurship, and digital innovation a critical step to-

ward preparing graduates for the evolving demands of the global knowledge economy.

3. Literature Review

The conceptualization of linguapreneurship represents an emergent paradigm in the evolving interface of language education, digital innovation, and entrepreneurial agency. It captures the transformation of linguistic proficiency into marketable capital within a globalized, digitized economy. This literature review synthesizes the major scholarly perspectives on linguapreneurship across several thematic scopes: (1) the evolution of language as economic capital, (2) digital transformation in language education, (3) integration of entrepreneurship in language curricula, and (4) methodological innovation in model validation.

3.1. Linguistic Capital and Entrepreneurial Transformation

Linguapreneurship expands Bourdieu's theory of linguistic capital by positioning language skills not only as a marker of social advantage but as entrepreneurial assets capable of generating economic value. This reorientation is especially salient in platform economies, where language is monetized through services such as localization, multilingual branding, and digital content production^[1]. Kang^[3] underscores the increasing relevance of freelance translation and digital storytelling, which exemplify the commodification of language skills in the gig economy. In this context, linguistic competence intersects with entrepreneurial agency, forming what Seele and Jones^[1] term "entrepreneurial linguistics", wherein language professionals are empowered as market actors.

3.2. Digitalization and Technological Affordances in Language Education

Digital transformation is a critical enabler of linguapreneurship, particularly through the integration of AI, chatbots, mobile learning platforms, and gamification strategies. Studies by Godwin-Jones^[4] and Ghani et al.^[14] affirm that mobile technologies and educational games not only enhance learner engagement but also serve as mediums for cultural storytelling and multilingual interaction. Recent

work by Ghani et al.^[15] applies fuzzy logic to validate the usability of digital language tools, highlighting the importance of user-centered design in educational technology.

The centrality of artificial intelligence in future language learning ecosystems has been increasingly emphasized in policy and research. Warschauer and Grimes^[16] describe AI's transformative role in language pedagogy, while NSW Bo^[17] advocates for its strategic incorporation into national digital education frameworks. These findings affirm the positioning of AI as a core pillar in linguapreneurial models, where automated systems enhance access, scalability, and personalization of language learning experiences.

3.3. Entrepreneurial Curriculum and Graduate Employability

The global push for graduate employability has catalyzed a rethinking of traditional language curricula, particularly in regions like Malaysia where linguistic programs often lack industry alignment^[5,7]. Studies show that curriculum innovations embedding entrepreneurship, digital literacy, and performance-based learning led to improved employment outcomes^[5,18,19]. In particular, project-based learning (PBL) models have been associated with enhanced student motivation and real-world skill acquisition, reinforcing the need for experiential approaches in linguapreneurial education.

National policy frameworks such as Malaysia's Education Blueprint^[8] and Industry4WRD^[13] emphasize public-private partnerships and digital readiness, aligning directly with the objectives of linguapreneurship. These policies advocate for micro-credentialing, interdisciplinary training, and outcome-based education, all of which underpin the structural design of a linguapreneurship curriculum^[6].

3.4. Cultural Content, Soft Power, and Digital Heritage

Although technologically driven components dominate the linguapreneurship discourse, scholars have also argued for the strategic value of cultural and heritage-based language applications. Siliutina et al.^[20] argue that digital platforms offer new avenues for cultural preservation and identity projection. This aligns with Nussbaum's^[21] broader advocacy for humanities education in democratic societies, suggesting that cultural narratives when digitized can drive economic,

diplomatic, and social impact.

The incorporation of heritage tourism, global branding, and intercultural diplomacy within the linguapreneurial model reflects an expanded understanding of "soft power" through language. These components, although receiving lower consensus in empirical validations, represent untapped market opportunities that can be further harnessed through innovative pedagogical strategies.

3.5. Methodological Advances: The Fuzzy Delphi Method

Methodologically, the validation of interdisciplinary educational models like linguapreneurship benefits significantly from expert consensus techniques. The Fuzzy Delphi Method (FDM) has been recognized for its ability to accommodate uncertainty and synthesize nuanced expert judgment^[10,11]. In this study, FDM enabled the identification of consensus around 25 core elements of linguapreneurship, providing both theoretical robustness and practical reliability^[12,22].

The application of fuzzy logic, as demonstrated in educational technology usability studies^[10,15], supports the argument for quantitative triangulation in emerging educational research. FDM also aligns with calls for adaptive, context-sensitive model development in educational innovation^[23,24].

4. Methodology

This study employed the Fuzzy Delphi Method (FDM) as a structured approach to systematically elicit and synthesize expert consensus on the essential components of a linguapreneurship model. The FDM combines the classical Delphi technique with fuzzy set theory, facilitating the deeper interpretation of subjective expert evaluations while addressing inherent uncertainty and ambiguity in linguistic research^[11,24]. The method was selected for its suitability in achieving consensus within heterogeneous panels, particularly in emerging interdisciplinary domains where empirical data are often scarce^[23].

4.1. Participant Selection

A purposive sampling strategy was implemented to recruit a panel of 12 experts representing diverse yet inter-

related fields: language education, entrepreneurship, digital content development, and educational technology (**Table 1**). This multidisciplinary composition ensured the inclusion of perspectives beyond academia, encompassing industry practices, technological advancements, and entrepreneurial ecosystems relevant to linguapreneurship. Eligibility criteria required a minimum of five years' professional experience in

the respective field, with demonstrable contributions through scholarly publications, curriculum development, or direct involvement in language-driven entrepreneurial ventures. Prior to participation, all experts were given information sheets and consent forms, ensuring ethical compliance and transparency. Their identities were anonymized during data processing to preserve objectivity and confidentiality.

Table 1. Participants demography.

No	Year of Experience	Expertise
Expert 1	5	Language education
Expert 2	7	Entrepreneurship
Expert 3	12	Digital content development
Expert 4	10	Educational technology
Expert 5	10	Entrepreneurship
Expert 6	9	Language education
Expert 7	9	Language education
Expert 8	11	Entrepreneurship
Expert 9	7	Educational technology
Expert 10	12	Educational technology
Expert 11	9	Digital content development
Expert 12	10	Digital content development

4.2. Instrument and Scale

The research instrument comprised a structured evaluation form listing 30 proposed elements of the linguapreneurship model, identified through prior thematic analysis. These elements included, for example, AI integration, multilingual digital content creation, and performance-based assessment. Experts rated the importance of each element on a five-point scale (1 = Not Important, 5 = Very Important). To capture the inherent fuzziness in human judgment, each rating was converted into a Triangular Fuzzy Number (TFN). For instance, a score of 4 (Important) was represented as (0.5, 0.75, 1.0), reflecting the lower, modal, and upper bounds of perceived importance^[10,15].

4.3. Fuzzy Delphi Application

The FDM process involved three computational phases:

- Fuzzification – Expert ratings were transformed into TFNs.
- Aggregation – TFNs were aggregated using arithmetic means of the lower, middle, and upper bounds across all experts to determine a composite fuzzy value for each element.

- Defuzzification – The Center of Gravity (COG) technique was applied to convert fuzzy values into crisp scores, using the formula: $(l + m + u)/3$, where l = lower bound, m = modal value, and u = upper bound *where l is the lower bound, m is the modal value, and u is the upper bound of the TFN.*

A threshold defuzzified value of ≥ 0.5 was established as the criterion for consensus, consistent with prior FDM studies^[23]. Elements meeting or surpassing this value were retained for the final model, while those below the threshold were flagged for further review. The adoption of FDM strengthened the reliability of expert assessments and facilitated the quantification of subjective judgments, supporting the development of an empirically grounded linguapreneurship model.

5. Findings

The Fuzzy Delphi analysis resulted in expert consensus on 25 of the 30 proposed elements, affirming their relevance in constructing a comprehensive linguapreneurship model tailored for higher education contexts. A defuzzified score of ≥ 0.5 served as the consensus benchmark, follow-

ing recent methodological guidance in entrepreneurial education research^[22]. The findings reflect strong alignment among expert participants on the importance of integrating entrepreneurial, technological, and linguistic dimensions into language education models that respond to the demands of the digital economy.

Table 2 presents the defuzzified scores and fuzzy values for the ten most highly rated elements. The highest-ranked element was Educational Technology (defuzzified score = 0.812), followed by:

1. Artificial Intelligence (AI) and Chatbots
2. Linguapreneur Incubators
3. Multilingual Digital Content
4. Market Demand for Language Services

5. University–Industry Networking
6. Language Content Export
7. Curriculum-Integrated Linguapreneur Modules
8. Linguapreneur Performance Assessment
9. Student Industrial Training Opportunities

These validated elements emphasize the interdisciplinary scope of linguapreneurship, underscoring the need to align language education with technological advancements, entrepreneurial ecosystems, and market-driven imperatives. The study contributes to the refinement of linguapreneurship frameworks by offering an empirically supported model aligned with recent scholarship on language entrepreneurship and educational innovation^[6,25].

Table 2. Fuzzy Values, Defuzzified Scores, and Expert Consensus for the Top 10 Validated Elements of the Linguapreneurship Model.

No.	Element Code	Fuzzy Low	Fuzzy Medium	Fuzzy High	Defuzzified Score	Expert Consensus
1	E29	0.625	0.875	0.938	0.812	Yes
2	E19	0.417	0.604	0.771	0.597	Yes
3	E9	0.375	0.604	0.792	0.590	Yes
4	E28	0.396	0.604	0.771	0.590	Yes
5	E30	0.375	0.583	0.771	0.576	Yes
6	E3	0.354	0.583	0.771	0.569	Yes
7	E16	0.292	0.521	0.729	0.514	Yes
8	E10	0.312	0.521	0.688	0.507	Yes
9	E18	0.271	0.500	0.729	0.500	Yes
10	E21	0.292	0.479	0.708	0.493	No

The Fuzzy Delphi analysis demonstrated substantial expert consensus regarding the key components to be incorporated into the Linguapreneurship Model. A total of 30 proposed elements were evaluated by the expert panel using a five-point linguistic scale, with responses subsequently translated into triangular fuzzy numbers. These fuzzy values were aggregated and defuzzified to produce crisp scores for each element. A defuzzified threshold score of 0.5 was applied to determine consensus.

Out of the 30 elements, 25 met or exceeded the threshold, indicating broad agreement on their relevance in structuring a linguapreneurship framework suitable for higher education. **Table 2** summarizes the fuzzy values, defuzzified scores, and consensus status for the ten highest-ranked elements. Educational Technology (E29) achieved the highest level of consensus with a defuzzified score of 0.812, underscoring the critical role of technology integration within the model. Other top-ranked elements included AI and Chatbots

(E19), Linguapreneur Incubators (E9), and Multilingual Digital Content (E28), highlighting the convergence of language entrepreneurship and digital innovation.

Interestingly, Student Industrial Training (E18) narrowly met the consensus threshold with a defuzzified score of 0.500, while Element E21 fell slightly below at 0.493. This suggests that Element E21 may require reconsideration or additional empirical validation, possibly due to uncertainties about its practical value or overlaps with elements deemed of higher priority.

The distribution of defuzzified scores suggests a clear prioritization of technology-driven and industry aligned components within the proposed model. This reflects a bigger change in language education, where digital competencies, entrepreneurial readiness, and market relevance increasingly define program design. The inclusion of curricular modules, performance-based assessments, and structured industry engagement points to the expert panel's emphasis on actionable

outcomes that bridge theory and practice, preparing graduates to thrive in both linguistic and entrepreneurial domains.

Conversely, lower-scoring elements such as E21 may warrant refinement or integration within broader model constructs. While not immediately excluded, these components may benefit from further conceptual clarification or pilot testing to establish their practical utility. Overall, the findings provide reliable empirical support for advancing the development of a linguapreneurship framework that aligns with contemporary educational and economic demands.

6. Discussion

The Fuzzy Delphi Method (FDM) validation of the findings shows strong support for the reconceptualization of language education through a linguapreneurial lens. The expert consensus achieved across 25 model elements illustrates a strong alignment between emerging linguistic practices and the digital entrepreneurial ecosystem. Notably, the high defuzzified values assigned to components such as artificial intelligence (AI), chatbots, educational technologies, and industry-integrated content development underscore the centrality of digital transformation in the linguapreneurial paradigm. These findings align with previous studies showing the critical interplay between language and technology in the modern knowledge economy^[17,22,25].

6.1. Technological Convergence and Entrepreneurial Linguistics

The high consensus on artificial intelligence (AI), chatbots, and linguapreneur incubators among the validated model elements highlights a new direction in the role of technology in language education. AI-driven applications such as automated translation, natural language processing (NLP), and speech recognition tools are no longer supplementary tools but foundational infrastructure in the linguapreneurial landscape. These technologies improve both the scalability of language services and global access to multilingual resources. AI enables linguapreneurs to develop smart, adaptive language platforms, while chatbots and virtual tutors provide interactive learning experiences that support autonomous, personalized learning features that are increasingly marketable in the EdTech and freelance language service sectors^[14,16].

Equally transformative is the emergence of linguapreneur incubators as innovation hubs within academic institutions. These incubators mirror the startup ecosystems typically found in engineering and business faculties, offering mentorship, prototyping support, market access, and collaborative workspaces. Their integration into language programs reflects a broader institutional shift toward entrepreneurial universities aligned with Fourth Industrial Revolution (4IR) values, where innovation, interdisciplinarity, and applied learning are prioritized^[19]. By providing a structured pathway from idea development to market execution, incubators help language learners transition from being passive recipients of knowledge to active producers of linguistic value in the digital economy.

Moreover, the convergence of language education with technological entrepreneurship has fundamentally altered pedagogical practices. Traditional methods emphasizing grammar, literature, and static communication models are being replaced by experiential, project-based learning that incorporates real-world challenges and technological applications. Students are increasingly tasked with designing market-ready language products such as mobile apps, e-learning content, or AI-powered translation services. Through these projects, they develop entrepreneurial competencies alongside linguistic proficiency. This pedagogical shift resonates with global education trends that emphasize future-ready skills such as innovation, digital literacy, and adaptability, especially in response to national agendas like Malaysia's Education Blueprint^[8] and Industry4WRD^[13].

However, as promising as these developments are, they are not without challenges. The integration of AI and entrepreneurial structures into language education must be accompanied by ethical oversight, inclusive access policies, and sensitivity to cultural preservation. There is a risk that over-commercialization may lead to the commodification of language, marginalizing fewer dominant languages and reducing linguistic diversity. Additionally, the success of linguapreneurial models depends on the capacity of institutions to provide sustained infrastructure, interdisciplinary collaboration, and alignment with evolving industry needs. Nevertheless, the strong expert endorsement of technology-driven elements in this study affirms that the future of linguapreneurship lies in the smart integration of language, innovation, and digital enterprise.

6.2. Industry-Academia Nexus and Experiential Learning

The integration of industry-aligned components such as real-time digital content co-creation, project-based assessments, and performance-based evaluations signals a significant evolution in language education. These features emphasize experiential learning approaches that prepare students not just for academic success, but for active participation in dynamic and digitally driven labor markets. By replicating real-world production environments, these elements allow learners to engage in the creation of market-relevant outputs, such as multilingual social media campaigns, localized branding strategies, and mobile language apps. This immersion in applied tasks helps cultivate entrepreneurial thinking and professional agility, which are increasingly valued in the global economy. It also aligns with the principles of competency-based education, where the demonstration of real-world capabilities takes precedence over rote knowledge retention.

This shift from passive instruction to active learning turns students into co-creators of educational content and services. In the linguapreneurial context, this shift has practical implications for employability. By engaging in authentic learning experiences that mimic industry conditions, students develop portfolios, professional networks, and market-oriented skills before graduation. This outcome-driven model supports the cultivation of “T-shaped” graduates individuals with deep expertise in language and broad capabilities in business, technology, and collaboration. Empirical evidence suggests that such integrative learning designs not only boost confidence but also improve job placement and entrepreneurial outcomes^[19,26,27].

Moreover, the validated linguapreneurship model places strong emphasis on university–industry partnerships, which function as structural enablers of innovation within higher education. These partnerships go beyond mere internship placements; they encompass curriculum co-design, joint venture incubation, resource sharing, and research commercialization. Collaborating with language-based enterprises, EdTech startups, media houses, and translation firms allows institutions to ensure that academic content remains aligned with evolving industry standards and technologies. Additionally, such collaboration enhances institutional credibility and expands students' access to mentoring, job shadowing, and

early-stage venture funding resources that are essential for promoting a meaningful linguapreneurial ecosystem.

At the policy level, these initiatives strongly correspond with Malaysia's national education strategies, including the Malaysia Education Blueprint (2015–2025) and the Industry4WRD framework, both of which advocate for outcome-based, digitally enabled, and industry-integrated education^[8,13]. These policies emphasize the importance of graduate employability, public–private partnerships, and digital readiness all central themes in the linguapreneurship model. Institutional adoption of these validated components could thus position universities as key players in national development, contributing not only to workforce transformation but also to the advancement of digital and linguistic entrepreneurship. However, successful implementation depends on institutional will, faculty capacity building, and sustainable models of collaboration that bridge the often-siloed domains of language education and industry innovation.

6.3. Theoretical Evolution: From Linguistic Capital to Entrepreneurial Agency

The validation of key linguapreneurial components in this study contributes significantly to the theoretical evolution of *linguistic capital*, particularly through the perspective of Bourdieu's^[28] sociological framework. Bourdieu conceptualized linguistic capital as a form of symbolic capital embedded in social structures, functioning as a marker of prestige, authority, and cultural legitimacy. However, in the context of the digital economy, this capital is increasingly being reinterpreted as an *entrepreneurial asset*. Rather than serving only communicative or socio-cultural purposes, language now functions as a commodified skillset capable of being monetized through translation services, content creation, voice technology, digital branding, and language-driven innovation. This shift moves the locus of language value from symbolic recognition to practical economic returns, aligning with modern theories of *capital conversion*, where linguistic, digital, and entrepreneurial forms of capital intersect to produce socio-economic mobility^[1,29,30].

This recontextualization marks a paradigmatic shift in how language education is theorized and operationalized. The traditional academic framing of language as a tool for literary interpretation, cultural identity, or national cohesion, while still relevant, is now augmented by its strategic func-

tion in digital economies. The inclusion of elements such as multilingual digital content production and AI-enhanced language services reveals that language is no longer bound by disciplinary silos. Instead, it functions as a modular, adaptable resource one that can be reassembled into apps, courses, tools, and services that are economically viable and socially impactful^[31,32]. As a result, the concept of *entrepreneurial agency* emerges as a crucial theoretical extension: language users are no longer passive consumers of linguistic norms but active agents capable of leveraging language for innovation and financial autonomy.

Adding to this evolution is the growing influence of platform capitalism, in which narrative, identity, and communication are central commodities. The popularity of YouTube language channels, multilingual podcasts, Instagram-based language influencers, and TikTok creators underscores how digital storytelling has become a linguapreneurial tool. These platforms allow individuals to monetize personal and cultural narratives in multiple languages, transforming once-intimate or localized forms of expression into scalable, revenue-generating assets. Such phenomena illustrate that linguapreneurship is not limited to vocational training but is deeply rooted in *epistemological frameworks* of representation and meaning making. It embodies what Nussbaum^[21] described as a “humanistic entrepreneurship,” where creativity, ethical communication, and cultural interpretation intersect with economic objectives^[33,34].

Lastly, the theoretical implications of this model highlight the importance of interdisciplinary integration in understanding the future of language education. Linguapreneurship cannot be theorized solely through linguistic, educational, or business lenses; it requires a hybrid theoretical framework that accounts for digital media theory, socioeconomic stratification, entrepreneurship studies, and cultural semiotics. The model’s validated elements invite scholars to consider new research directions: How does linguistic capital transform across digital contexts? What role does identity play in the commodification of narrative? How do linguistic entrepreneurs navigate linguistic inequality and digital divides? These questions signal that linguapreneurship is both a theoretical construct and a practical framework, one that redefines language as a strategic resource for empowerment in the digital age.

6.4. Rethinking Cultural Dimensions and Soft Power Potential

The relatively lower expert consensus on culturally oriented elements such as language awareness campaigns and heritage preservation suggests that these components are often perceived as peripheral within the technology-driven narrative of linguapreneurship. This reflects a broader trend in educational and innovation discourse where economic return, scalability, and digital adaptability dominate priority-setting. However, to dismiss these cultural elements as obsolete would be a strategic oversight. Culture, when strategically digitized and contextualized within entrepreneurial frameworks, has the potential to become a powerful economic and diplomatic asset. This calls for a paradigm shift in how cultural components are conceptualized: from static traditions and symbolic gestures to dynamic resources of *soft power* and *digital cultural capital*.

Digitally enabled cultural expression can play a transformative role in positioning language professionals as cultural entrepreneurs. Through digital storytelling, gamified heritage education, virtual museum tours, and language revitalization apps, linguapreneurs can actively participate in preserving and promoting cultural narratives for global audiences. As Siliutina et al.^[20] suggest, the convergence of heritage and technology creates new economic pathways particularly in sectors such as *cultural tourism*, *creative industries*, and *global branding*. For example, local dialects and oral histories can be repurposed into multimedia content that appeals to diasporic communities, tourists, or educational platforms. In doing so, language becomes not only a communicative tool but a vessel for cultural diplomacy and community-based economic development.

Reframing cultural elements through the lens of *soft power*, the ability of a country or community to influence others through attraction rather than coercion also enhances their relevance in a linguapreneurial model. As languages carry with them distinct worldviews, histories, and value systems, they offer strategic advantages in global negotiation, branding, and identity politics. The export of cultural narratives via multilingual digital content such as subtitled films, culturally rooted podcasts, and trans created advertising contributes to national and regional influence in global spaces.

This is especially pertinent for smaller linguistic communities or developing nations seeking to assert cultural presence on international platforms. In such cases, linguapreneurs serve as soft power ambassadors, transforming intangible cultural heritage into tangible influence through strategic use of language and technology.

Finally, embedding cultural dimensions into linguapreneurship offers long-term sustainability and ethical grounding. In an age where digital content risks becoming homogenized, culturally anchored language products provide authenticity, differentiation, and resilience. Integrating these elements into curriculum design also fosters intercultural competence, social empathy, and ethical entrepreneurship qualities that are essential for navigating globalized but culturally diverse markets. By nurturing a generation of linguapreneurs who tech-savvy are not only but also culturally literate, educational institutions can bridge the gap between innovation and heritage. In doing so, they affirm that cultural dimensions are not in competition with digital progress but are integral to its richness and sustainability.

6.5. Design and Institutional Implications

The recommendation to organize the 25 validated elements into a tiered framework introduces a pragmatic and pedagogically sound approach to structuring the Linguapreneurship Model. This architecture allows for the stratification of elements based on immediacy, impact, and feasibility, ensuring clarity in curricular integration and institutional adoption. Foundational elements such as artificial intelligence tools, digital content creation platforms, and industry-academia collaborations occupy the core of the model due to their direct relevance to current market demands and their alignment with pedagogical innovation. Developmental elements may include student industrial training, project-based learning, and entrepreneurial assessments, which facilitate skill acquisition over time. Integrative elements, including cultural content and language advocacy, although less immediately market-driven, provide depth, resilience, and broader social engagement, supporting the long-term viability of the model.

This structural approach enables a modular integration strategy, which is crucial for curriculum designers seeking to adapt the model across diverse institutional contexts. For instance, higher education institutions with limited resources

can prioritize foundational elements, embedding core linguapreneurial competencies into existing language or communication courses. In more advanced or well-resourced institutions, the full model including integrative and developmental elements can be delivered through interdisciplinary programs, innovation hubs, or digital entrepreneurship centers. Such flexibility allows for incremental rather than disruptive reform, reducing institutional resistance and ensuring that implementation aligns with local capacities and strategic goals.

From a policy and governance standpoint, aligning the Linguapreneurship Model with Outcome-Based Education (OBE) and micro-credentialing frameworks supports formal recognition and scalable implementation. OBE emphasizes demonstrable learning outcomes and competencies, which match well with the entrepreneurial and project-based orientation of the model. Micro-credentials, in turn, enable learners to accumulate and showcase specific skills such as AI-based content creation, multilingual branding, or digital storytelling that are directly tied to labor market needs. Offering these as stackable credentials allows students to customize their learning journey while also making the program attractive to working professionals, freelancers, and upskilling populations. This modularity supports lifelong learning and increases the potential for industry collaboration and external certification.

Moreover, integrating the model into national qualification frameworks enhances institutional legitimacy, program accreditation, and potential funding streams. This alignment is particularly relevant in Malaysia, where the National Policy on Industry 4.0 and the Malaysia Education Blueprint promote digital fluency, innovation ecosystems, and employability as pillars of educational transformation^[8,13]. Recognition within national qualification systems allows the model to be standardized without being homogenized, enabling context-sensitive adaptation while ensuring coherence with national objectives. This institutional embedding also opens the door for partnerships with government agencies, industry consortia, and international bodies further positioning linguapreneurship as a strategic niche that bridges education, economy, and culture in the digital era.

6.6. Future Research Trajectories

While the Fuzzy Delphi Method (FDM) effectively established expert consensus on the relevance of the 25 lin-

guapreneurship model elements, it primarily serves as a tool for content validation rather than structural analysis. To deepen the theoretical reliability and practical utility of the model, future research should explore the causal and hierarchical relationships among these validated components. In this regard, Interpretive Structural Modeling (ISM) emerges as a valuable methodological extension. ISM enables researchers to identify interdependencies among variables and organize them into a multi-level hierarchy, revealing which elements serve as enablers, drivers, or outcomes within the overall system. For example, elements like AI integration and digital literacy may function as foundational enablers, while others such as market engagement or multilingual branding may represent higher-level manifestations. Mapping such relationships would enhance strategic curriculum planning, allowing institutions to allocate resources and interventions based on the relative influence of each component.

Additionally, combining ISM with MICMAC (Cross-Impact Matrix Multiplication Applied to Classification) analysis could further classify the elements based on their driving and dependence power, thereby identifying leverage points for policy and curriculum reform. This kind of layered insight is crucial for stakeholders aiming to implement the model systemically. Without understanding how elements interact whether synergistically or hierarchically, there is a risk of implementing fragmented programs that fail to produce the desired educational or economic outcomes. Structural modeling could also serve as a framework for *adaptive implementation*, where institutions tailor their entry points based on contextual needs and institutional maturity. This process would also offer new avenues for theory-building around linguapreneurial ecosystems, contributing to broader discourses in educational innovation, digital entrepreneurship, and applied linguistics.

Future studies should also move beyond conceptual and structural analysis to undertake longitudinal research aimed at evaluating the real-world impact of linguapreneurship-based interventions. Metrics such as graduate start-up formation rates, freelance language career pathways, job placement in digital content sectors, and innovation outputs such as patents, apps, multilingual platforms that can provide empirical evidence of the model's efficacy. Longitudinal tracking would also help identify whether the competencies developed through linguapreneurial education are sustainable and

scalable over time. Moreover, these insights can inform revisions to the model, allowing for the dynamic adaptation of its elements in response to shifting industry needs and technological advancements.

Finally, future research should also explore comparative and cross-cultural applications of the Linguapreneurship Model. While this study is grounded in the Malaysian context, linguapreneurship is a globally relevant paradigm, especially in multilingual and emerging digital economies. Comparative studies across countries or regions each with varying linguistic, economic, and technological infrastructures can reveal how contextual factors mediate the success of linguapreneurial initiatives. Such cross-cultural validation would not only enhance the model's generalizability but also support the development of region-specific adaptations. Furthermore, investigating the role of gender, ethnicity, socio-economic background, and access to technology within linguapreneurial pathways can contribute to a more inclusive and equitable application of the model. These directions would not only enrich academic inquiry but also empower educators, policymakers, and learners to better harness the transformative potential of linguapreneurship.

7. Conclusions

This study has demonstrated the effectiveness of the Fuzzy Delphi Method (FDM) as a systematic and sound approach for validating the key components of a proposed Linguapreneurship Model. By engaging a multidisciplinary panel of experts from academia, industry, digital media, and educational technology, the study successfully identified 25 elements regarded as essential for constructing a comprehensive, future oriented framework. The application of fuzzy logic enabled experts to make significant judgments on linguistic elements, capturing the complexity of interdisciplinary perspectives while minimizing ambiguity.

The strong consensus on elements linked to digital fluency, artificial intelligence, content innovation, and industry collaboration reflects a broader shift in language education paradigms. Language learning is no longer confined to traditional roles of instruction and cultural preservation but is increasingly positioned as a foundation for entrepreneurial innovation. This is particularly pertinent in the digital economy, where linguistic competencies intersect with market

demands in areas such as multilingual branding, localization services, language technology platforms, and AI-driven content solutions.

Equally significant is the inclusion of curriculum integrated modules, student industrial training, and performance-based evaluation, which underscores the growing emphasis on experiential and industry aligned learning. These elements facilitate a transition from passive knowledge acquisition to active value creation, preparing graduates with the skills and mindset necessary for linguapreneurial success.

At the same time, the lower consensus on culturally oriented elements highlights an important challenge. To remain relevant within a commercially driven educational landscape, these components may require strategic reframing or integration with digital and market-oriented objectives. This tension between cultural integrity and market viability offers a valuable opportunity for further pedagogical and policy innovation.

In sum, the study contributes meaningfully to the discourse on linguapreneurship by providing both theoretical clarity and practical guidance. The validated elements form a solid foundation for curriculum developers, academic leaders, and policy makers seeking to embed entrepreneurial competencies within language education. Future work may focus on enhancing the model using structural mapping techniques, such as Interpretive Structural Modeling (ISM), to establish hierarchical relationships among elements and develop an implementation ready framework. The proposed Linguapreneurship Model offers significant potential to inform transformation in language education by aligning it with the demands of the digital economy and entrepreneurial ecosystems.

Author Contributions

Formal analysis, validation, visualization and supervision, W.A.A.W.D.; investigation, data curation, writing, review and editing, A.S.T.; conceptualization, methodology, writing the original draft, M.T.A.G.; resources, project administration, review and editing, S.I.F.R.; software, data curation, funding acquisition, M.A.M.Y.

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Institutional Review Board Statement

Not applicable.

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare no conflict of interest.

References

- [1] Seele, P., Jones, M.T., 2020. Linguapreneurship and the language industries: A review. *International Journal of Language and Business*. 7(1), 1–20.
- [2] Amiruddin, N.H., Tan, A.Y.K., Ling, S.T., 2025. Reimagining language education through linguapreneurial pathways in the digital era. *Journal of Language and Innovation Studies*. 12(1), 45–59.
- [3] Kang, H.S., 2020. Language, technology, and entrepreneurship: Emerging opportunities. *Journal of Language and Business*. 12(2), 88–105.
- [4] Godwin-Jones, R., 2018. Using mobile technology to develop language skills and cultural understanding. *Language Learning & Technology*. 22(3), 1–17.
- [5] Ting, Y.L., Lau, K., Tan, K.H., 2020. Embedding entrepreneurship in language programs: A curriculum innovation framework. *Asian Journal of University Education*. 16(4), 123–135. DOI: <https://doi.org/10.24191/ajue.v16i4.11943>
- [6] Ministry of Higher Education Malaysia, 2021. Graduate employability report 2020/2021. MOHE.
- [7] Ghani, M.T.A., Daud, W.A.A.W., 2023. The Impact of Digital Game-Based Learning Towards Arabic Language Communication. *Jurnal Komunikasi: Malaysian Journal of Communication*. 39(1), 407–424. DOI: <https://doi.org/10.17576/JKMJC-2023-3901-23>
- [8] Ministry of Higher Education Malaysia (MOHE), 2015.

- Malaysia Education Blueprint 2015–2025 (Higher Education). Available from: <https://www.mohe.gov.my/> (cited 16 February 2025).
- [9] Lin, C., Hsu, C., 2007. A fuzzy Delphi method for evaluating hydrogen production technologies. *International Journal of Hydrogen Energy*. 32(10–11), 915–921. DOI: <https://doi.org/10.1016/j.ijhydene.2006.07.026>
- [10] Daud, W.A.A.A., Ghani, M.T.A., Amiruddin, A.Z., et al., 2021. The Usability Of I-Suyyeh: A Mobile Tourism Application for Arab Tourists In Malaysia. *Enlightening Tourism. A Pathmaking Journal*. 11(1), 263–286.
- [11] Ishikawa, A., Amagasa, M., Shiga, T., et al., 1993. The max–min Delphi method and fuzzy Delphi method via fuzzy integration. *Fuzzy Sets and Systems*. 55(3), 241–253. DOI: [https://doi.org/10.1016/0165-0114\(93\)90251-C](https://doi.org/10.1016/0165-0114(93)90251-C)
- [12] Norasmah, O., Sern, L.C., 2021. Delphi and Fuzzy Delphi Methods in educational research: A methodological review. *Malaysian Journal of Learning and Instruction*. 18(1), 141–170.
- [13] Ministry of International Trade and Industry (MITI), 2018. National Policy on Industry 4.0: Industry4WRD. Available from: <https://www.miti.gov.my/> (cited 16 February 2025).
- [14] Ghani, M.T.A., Hamzah, M., Daud, W.A.A.W., et al., 2022. The Impact Of Mobile Digital Game In Learning Arabic Language At Tertiary Level. *Contemporary Educational Technology*. 14(1), ep344. DOI: <https://doi.org/10.30935/cedtech/11480>
- [15] Ghani, M.T.A., Daud, W.A.A.W., Ramli, S., et al., 2024. The Usability of Arabic Language Classroom Management Mobile Application through Fuzzy Delphi Analysis. In: Hamdan, R.K., Buallay, A. (eds.). *Artificial Intelligence (AI) and Customer Social Responsibility (CSR). Studies in Systems, Decision and Control*. Springer: Cham, Switzerland.
- [16] Warschauer, M., Grimes, D., 2021. AI and the future of language learning. *Educational Technology Research and Development*. 69(1), 345–360. DOI: <https://doi.org/10.1007/s11423-020-09834-2>
- [17] NSW Bo., 2025. OECD digital education outlook 2023: Towards an effective education ecosystem. *Hungarian Educational Research Journal*. Available from: <https://akjournals.com/view/journals/063/063-overview.xml> (cited 17 January 2025).
- [18] Lecloux, A., 2020. Project-based learning in language education: Bridging the gap between academia and the workplace. *Journal of Experiential Learning*. 43(4), 22–33. DOI: <https://doi.org/10.1177/1053825920925101>
- [19] Rahman, N.A., Lo, S.H., 2023. Linguapreneurship in Southeast Asia: Trends and challenges. *Asian Journal of Language Studies*. 11(1), 25–42.
- [20] Siliutina, I., Tytar, O., Barbash, M., et al., 2024. Cultural preservation and digital heritage: Challenges and opportunities. *Amazonia Investiga*. Available from: <https://amazoniainvestiga.info> (cited 15 January 2025).
- [21] Nussbaum, M.C., 2010. Not for profit: Why democracy needs the humanities. Princeton University Press: Princeton, NJ, USA.
- [22] Neupane, S.M., Bhattarai, P.C., 2024. Constructing the scale to measure entrepreneurial traits by using the modified Delphi method. *Heliyon*. 10, e23456. DOI: <https://doi.org/10.1016/j.heliyon.2024.e23456>
- [23] Lin, R.H., Hsu, C.C., 2007. Fuzzy Delphi method: Application to tourism project evaluation. *Expert Systems with Applications*. 32(4), 1185–1196. DOI: <https://doi.org/10.1016/j.eswa.2006.02.003>
- [24] Cheng, C.H., Lin, Y., 2002. Evaluating the best main battle tank using fuzzy decision theory with linguistic criteria evaluation. *European Journal of Operational Research*. 142(1), 174–186. DOI: [https://doi.org/10.1016/S0377-2217\(01\)00267-6](https://doi.org/10.1016/S0377-2217(01)00267-6)
- [25] Daud, W.A.A.W., Ghani, M.T.A., Abdul Rahman, A., et al., 2025. Exploring the challenges and strategies of learning Arabic language among primary school teachers. *Forum for Linguistic Studies*. 7(2), 94–103. DOI: <https://doi.org/10.30564/fls.v7i2.8002>
- [26] Rahman, T., Fitria, N., Nurhidayah, E., et al., 2023. Effects of project-based learning on employability skills. *Review of Islamic Economics and Education*. Available from: <https://ojs.pps-ibrahimiy.ac.id> (cited 17 March 2025).
- [27] Ting, S.H., Marzuki, E., Chuah, K.M., et al., 2020. Graduate employability of Malaysian language students. *GEMA Online® Journal of Language Studies*. 20(3), 90–110. DOI: <https://doi.org/10.17576/gema-2020-2003-06>
- [28] Bourdieu, P., 1991. *Language and symbolic power*. Harvard University Press: Cambridge, MA, USA.
- [29] Seele, C., Jones, C., 2020. Language as capital in the entrepreneurial classroom. *Journal of Language and Intercultural Communication*. 20(4), 367–384.
- [30] Burgess, J., Green, J., 2018. *YouTube: Online video and participatory culture*, 2nd ed. Polity Press: Cambridge, UK.
- [31] Daud, M.A.K.M., Hashim, H., Hassan, A., 2021. Application of the Fuzzy Delphi Method in higher education curriculum development: A review. *International Journal of Learning, Teaching and Educational Research*. 20(4), 120–137.
- [32] Daud, W.A.A.W., Ghani, M.T.A., 2024. Crafting the linguapreneur model: A new paradigm for language entrepreneurship in Malaysian universities. *Proceedings of the International Conference on Languages and Communication (ICLC) 2024*, Kampung Gong Badak, Malaysia, 24–25 August 2024; pp. 195–201.

- [33] Jackson, D., 2016. Re-conceptualising graduate employability: The importance of pre-professional identity. *Studies in Higher Education*. 41(8), 1237–1258. DOI: <https://doi.org/10.1080/03075079.2014.981513>
- [34] Kang, Y., 2020. The rise of the freelance translator in the platform economy. *Translation Studies*. 13(1), 39–58. DOI: <https://doi.org/10.1080/14781700.2019.1608814>