INNOVATION COMMUNICATION OF EDTECH STARTUP ENTREPRENEUR

DEEPROM DEVAHASTIN

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Fulfillment of the Requirements for the Degree of
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ABSTRACT

Title of Dissertation	INNOVATION COMMUNICATION OF EDTECH STARTUP ENTREPRENEUR
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The research is aimed 1) to study the innovation communication of EdTech startup ecosystem in successful countries. 2) to explore the innovation communication of EdTech startup ecosystem in Thailand. The study was divided into two parts:

Part 1: The study of innovation communication af EdTech startup ecosystem in successful countries was conducted by qualitative research through the documentary analysis from public records of the organizations in EdTech startup ecosystem in the United States of America, the People's Republic of China, and the Republic of India. The results show that at the national context level: In the political context, all three countries have clear policies supporting educational innovation, despite differences in their political systems. In the economic context, these countries have significant GDP rankings: the United States is ranked first, China is ranked second, and India is ranked fifth. In the social and cultural context, these countries have the largest populations in the world: India is ranked first, China is ranked second, and the United States is ranked third. In the technological context, these countries invest in research and development in technology and innovation, ranking first in China, second in the United States, and fourth in India. At the industry level: In the United States, there is a diverse range of company types, including corporate learning, upskilling, and post-secondary education. In China and India, the focus is on tutoring and test preparation. At the organizational level: There are various communication strategies for educational innovation. In the United States, the primary focus is on communication with businesses and educational institutions, using Content Marketing strategies to establish leadership positions. In China, the main focus is on communication with students and parents, utilizing Influencer Marketing strategies to build brand awareness. In India, digital and traditional media are used in

combination (Hybrid Marketing) to reach a large number of learners.

Part 2: The study of innovation communication of EdTech startup ecosystem in Thailand was conducted by qualitative research through in-depth interviews with key informants. The study found that communication roles of EdTech startup entrepreneurs changes corresponding to the organization's growth-startup phase (product-market fit), growth phase (business model fit), and expansion phase (scale). Innovation communication with employees is another crucial aspect for entrepreneurs as it relates to product and service creation, organizational development, and adds value to the company. Research reveals that entrepreneurs communicate with employees on three main fronts: Communication for Business Generation: Involves operations and activities across the entire organization to generate business. Communication to Cultivate Organizational Culture: Relates to establishing shared values among individuals within the organization. Situation-based Communication: Deals with events outside the normal scope, both positive events such as celebrations of success and goal achievements, and negative events such as crisis communication. Furthermore, communication aligns with the organizational structure designed for minimal hierarchy, incorporating representatives from each department to facilitate the exchange of perspectives, ideas, and expertise. This collaborative approach leads to the generation of new innovations. Communication plays a crucial role in building trust, shaping perspectives, and fostering ideas that contribute to the innovation culture of the country. There will be the use of media to make the public aware and understand various innovations, including promoting a culture of learning, exploration, and knowledge discovery.

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CHAPTER 1

INTRODUCTION

1.1 Background and Significance of the Problem

The Fourth Industrial Revolution is the fusion of physical, digital, and biological technologies, resulting in profound changes across industries. It gives rise to new business models, shifts from traditional practices, and improvements in systems, products, consumption, transportation, and delivery. This revolution extends beyond economic aspects, affecting societal processes such as work methods, communication, identity expression, information seeking, and entertainment. It signifies a historical transformation in terms of scale, speed, and the breadth of its impact. All sectors of society, including government, business, academia, and the public, have a collective responsibility to understand how technology will reshape the economy, society, culture, and human nature more clearly (Schwab, 2016).

In recent years, numerous industries have been significantly and continuously impacted by digital technology, particularly in the media and entertainment sectors, encompassing print media, film, radio, television, music, news, advertising, and the education industry. Anand (2016) noted that although education may seem distinct from entertainment and other content-related products, they share similarities. The same technologies that transformed other industries are now affecting the education sector. Developments such as high-speed wireless internet, platforms, applications, search capabilities, hardware devices, and software innovations are causing substantial changes in the education industry, similar to other sectors that have adapted over the past century. The education industry is currently facing a major transformation driven by digital technologies. From the research conducted by the World Economic Forum (2015), which gathered data on the necessary skills for the U.S. labor market over a period of more than 50 years, spanning from 1960 to 2009, it was found that the skills required for work have undergone significant changes. These

changes include a shift from routine cognitive skills, nonroutine manual skills, and routine manual skills to nonroutine analytical skills and nonroutine interpersonal skills.

As the economy increasingly becomes innovation-driven, the demand for skills in the workforce has evolved. The 21st Century Skills, categorized into three main groups, are essential for functioning in an innovation-driven economy:

1) Foundation Literacies: This includes language literacy for reading and writing, numeracy, scientific literacy, ICT literacy, financial literacy, and cultural and civic literacy.

2) Competencies: These comprise critical thinking/problem-solving, creativity, communication, and collaboration.

3) Character Qualities: These involve curiosity, initiative, persistence/grit, adaptability, leadership, and social and cultural awareness.

It is evident that 21st Century Skills are dynamic and continuously changing. Traditional teaching methods in schools and universities are no longer sufficient to address the development of these skills. There is a need for individuals to adapt to lifelong learning to be prepared for various changes. This concept was first introduced by Clint Taylor in 1993, emphasizing that learning is not confined to classrooms or university walls but occurs in various situations throughout life.

Digital technology has responded to the need for lifelong learning, giving rise to new educational innovations in four areas: personalized and adaptive content and curricula, open educational resources, communication and collaboration tools, and interactive simulations and games.

1) Personalized and Adaptive Content and Curricula: Digital technology allows learners to choose content and curricula that align with their interests. Platforms such as Knewton, Smart Sparrow, and Khan Academy analyze learner data to tailor content to individual learning preferences.

2) Open Educational Resources: Learners can easily access a wealth of educational resources. Platforms like LearnZillion, Curriki, and BetterLesson enable teachers to share content in the form of user-generated content.

3) Communication and Collaboration Tools: These tools enable learners to communicate and collaborate for interactive learning and project-based learning. Examples include Google Apps for Education, OneNote, and Facebook.

4) Interactive Simulations and Games: Learning through interactive simulations and games engages learners and makes the learning process more enjoyable. Examples include Explore Learning, Tynker, and Games for Change.

In 2018, Accenture produced a report on Digital Disruption in Education, which compiled key issues where digital technology impacts the education industry. The details are as follows:

1) Hyper-Relevant Skills: New technologies, especially Artificial Intelligence (AI), have transformed the nature of work, necessitating educational adjustments. Education must prepare individuals with skills that cannot be easily automated, such as creativity, emotional intelligence, critical thinking, and the ability to rapidly reskill.

2) Lifelong Learning: The demand for new skills is rapidly changing, and individuals who cannot adapt risk being left out of the digital economy. Lifelong learning is essential, and education service providers must keep pace and align with the needs of both learners and employers.

3) Unbundled and Personalized: Unbundling traditional educational components allows for more cost-effective and immediately applicable skills. Timely and personalized responses to individual learner needs are necessary for optimal learning efficiency.

4) Experience-Driven: Learners should have easy access to educational content online, either free or at a low cost. Educational service providers must create experiences that connect learners to real-world situations through technologies like Augmented Reality (AR) and Virtual Reality (VR).

5) Platforms and Partnerships: Collaboration between education service providers, government, employers, and related industries is crucial. Digital platforms can connect learners globally to an ecosystem of learning and experiences.

Additionally, the report suggested adapting to factors influencing fundamental learning behaviors, including:

1) Artificial Intelligence (AI): Use AI to automate suitable repetitive tasks and enhance convenience for learners, as well as assess future learning needs.

2) Internet of Things (IoT): Develop strategies to collect data through online platforms and connect everything to provide learners with on-demand access.

3) Digital Prioritization: Invest in flexible and efficient digital channels and digital assets for all stakeholders.

4) Personalization: Understand learners through data and analysis, potentially collaborating with relevant sectors to apply analysis results on a larger scale.

5) Emerging Entrants: Address learner needs and foster an innovative culture ready to create new expectations.

6) Rising Costs: Provide alternatives and unbundle traditional education costs for greater learner choice.

7) Skill Gap: Collaborate with employers and the government to understand and adapt teaching to market needs.

As technology has driven the convergence of the education world with the digital realm, new players have emerged in the education industry, distinct from traditional universities or schools. These take the form of startup businesses, collectively forming the EdTech industry, estimated to be valued at up to 252 billion USD within the year 2020 (EdTechX, 2016). Nead (2019) describes the Education Technology or EdTech industry as a convergence of technological and educational advancements, revolutionizing the landscape of education across various levels, including Early Childhood, K-12, Higher Education, and Lifelong Learning. Several interesting case studies include:

1) Khan Academy: Founded by Salman Khan in 2009, Khan Academy started as a tutoring initiative for family members and friends via phone calls in 2004. Using various online technologies, Khan expanded the reach of his educational videos, covering a wide range of subjects. Khan Academy, established as a non-profit organization in 2009, received support from renowned entities like Google and Bill Gates. Presently, Khan Academy offers over 10,000 videos, with more than 6 million users per month and over 750 million total views.

2) Udacity: Founded by Sebastian Thrun in 2011, Udacity signaled a significant shift in higher education by directly targeting the advanced education sector. Unlike Khan Academy, Udacity aims at higher education levels and collaborates with leading technology companies in course design, focusing on AI, Robotics, AR, VR, etc. Udacity is supported by major funds and provides opportunities for learners to work with partner companies after completing courses.

3) Coursera: Founded by Andrew Ng and Daphne Koller in 2012, Coursera collaborates with top universities worldwide, offering a wide array of courses across various categories. Learners can access courses for free, but payment is required for certificates. With 2,000 courses and 28 million users, Coursera has become a prominent platform for online education.

4) edX: Founded by Harvard and MIT in 2012, edX is a collaborative effort among leading global universities. Initially viewed as rivals, Harvard and MIT joined forces to bring higher education online. edX operates as a non-profit organization, offering free course registrations with the option to pay for certificates. Presently, edX offers 1,270 courses, with approximately 10 million learners.

Moreover, the EdTech movement is not limited to students alone; there is also a significant push for educational opportunities for working professionals. In 2015, LinkedIn acquired Lynda.com, an online course company for working professionals, for 1.5 billion USD. In 2016, Microsoft acquired LinkedIn for 26.2 billion USD, further emphasizing the importance of EdTech in the professional development landscape.

For Thailand, according to the data collected by Techsauce (2018), it was found that businesses and fundraising activities in the form of startups began to emerge in the years around 2011-2012. Notably, companies such as 2C2P in the Fintech industry (with a $1 million investment from the United States) and Ookbee in the Digital Content industry (with a $2 million investment from the United States) were among the early players. The first Edtech company to be recorded in 2014 was Taamkru, receiving a $620,000 investment from the United States. Taamkru is an online platform for teaching school-age children, providing services such as online tests for parents to teach their children, collecting teaching articles for school-age children, and creating a community for questions and answers by experts who assess

standards for children of the same age. Taamkru received the Echelon Most Promising Startup award and won The Start-UP reality show on Channel News Asia in Singapore.

Around the same time, other Edtech companies emerged in Thailand, such as Globish and SkillLane. Globish is an English language teaching institution for working adults through online channels. It employs a one-on-one teaching format with certified foreign instructors, using teaching methods from abroad that guarantee noticeable differences within three months. Globish was the winner of the GMM ONE Channel's Flying Tiger competition in 2016 and received a 3 million baht investment from Mr. Piboon Damrongchaitham and Mr. Tan Passakornnatee.

Meanwhile, SkillLane is a platform for online courses through websites and mobile applications, targeting working-age individuals. It gathers experts in various fields to teach through videos, compiling lessons that cover all the needs for working people, including finance, investment, business, marketing, startups, and even personal development. SkillLane received an investment from Mr. Itthipat Peeradechapan (Tob), in 2017, to penetrate the Business-to-Business market.

Although startups in the Edtech industry may not have expanded rapidly or received as much investment as other industries such as Fintech or E-Commerce, there have been continuous efforts to promote and support them in various ways. For example, the organization of the EdTech Asia Summit in Bangkok in 2016, a specialized EdTech conference bringing together experts and entrepreneurs in EdTech startups for networking and exchange. Thai EdTech startups participating in this event included TaamKru, SkillLane, Globish, Knowledge Market, and ParentsHero (Techsauce, 2016).

In 2018, the Education Disruption Conference was organized by Disrupt, KBank, and TCP, with collaboration from various sectors such as TDRI, dtac, PTT, and Areeya Property. The event aimed to present and exchange perspectives on the EdTech industry in Thailand and included the organization of an EdTech Hackathon. This event evolved into the Stormbreaker Venture EdTech Accelerator, a project fostering startups in the education sector, particularly the first of its kind in Southeast Asia. The project aimed to collectively bring about changes in the education sector for one million Thai individuals by the year 2020 and to invest in and support EdTech in

five areas: English For All, STEM and Coding For All, Cloud-Powered School, Teacher of the Future, and Reskill Professional.

In the first cohort of the program, four companies were selected to participate. These companies were Vonder, a chatbot for enjoyable learning for both children and adults; InsKru, a platform for inspiring and developing teacher potential; OpenDurian, an online learning platform and exam repository for students, learners, and working individuals to prepare for exams and develop various skills; and Voxy, an online English language teaching operating system aiming to elevate English language learning in Thailand. In the second cohort in 2019, four additional companies were selected, including Conicle, a learning platform for organizations; FoxFox, a chatbot for programmers; Look'n Say, a speech learning application for the hearing-impaired; and WE Space, an online career guidance platform for students and learners.

The presence of such projects and companies related to EdTech in Thailand reflects the potential and the growing trend of the industry in the country. The EdTech industry not only presents significant business opportunities and values but also plays a crucial role in creating value in education and human resource development. This is essential for the development of society, the nation, and humanity, preparing them to face new challenges arising from technology. It aligns with various development plans, including the United Nations' 2030 Agenda for Sustainable Development, focusing on Quality Education, the National 20-Year Strategic Plan (2561-2580), and the 12th National Economic and Social Development Plan (2560-2564).

The outbreak of COVID-19 has had significant impacts on the EdTech industry, creating unprecedented demand for online education solutions due to school closures and the need for remote learning during the pandemic crisis (McKinsey & Company, 2022). In response to these demands, digital learning platforms, such as virtual classrooms and educational apps, have played a crucial role in enabling educational institutions to transition to online teaching formats and support continuous learning processes for students during the pandemic. The adapted and personalized learning experiences, improved access to education, and flexibility in adjusting to individual needs have highlighted the potential of EdTech in the long term. The industry continues to grow even after the emergency situation, emphasizing the role of EdTech in transforming educational approaches. There is a focus on the

necessity of embracing digital methods to ensure efficient and accessible learning opportunities.

Investing in the foundation of EdTech and developing relevant skills are deemed crucial to maximize the positive impact on education in the post-pandemic era. Communication plays a pivotal role in driving innovation, fostering diversity, promoting teamwork, and encouraging collaborative development (Goryachev, 2018). Innovation communication, a topic studied strategically in organizational communication, revolves around the relationships between organizations and stakeholders concerning new products, services, and technologies (Mast, Huck, and Zerfass, 2005). Research in this area emphasizes studying innovation communication and its impact on the innovation process, from ideation to introduction, as part of organizational communication (Pfeffermann, 2011).

This research study focuses on Thai EdTech startups in the dimension of communication for innovation management. While previous literature often studied communication in large corporate or SME settings, this research aims to explore the communication strategies suitable for startups. Startups are businesses that are apt for managing innovation and technology to solve industry problems, creating value, generating employment, and contributing to economic growth significantly. The research aims to study communication for innovation management, providing insights for entrepreneurs or those aspiring to become entrepreneurs to apply in building their startups. This will promote the growth of a quality ecosystem, aligning with Thailand 4.0 initiatives and the establishment of the National Startup Committee.

1.2 Research Questions

1) What is the innovation communication of EdTech Startup ecosystem in successful countries?

2) What is the innovation communication of EdTech startup ecosystem in Thailand?

1.3 Research Objectives

1) To study the innovation communication of EdTech startup ecosystem in successful countries.

2) To explore the innovation communication of EdTech startup ecosystem in Thailand.

1.4 Scope of the Study

The study “Innovation Communication of EdTech Startup Ecosystem” aims to study the innovation communication of EdTech startup ecosystem in three successful countries: the United States of America, the People’s Republic of China, and the Republic of India, to compare with that in Thailand. Qualitative research was conducted by documentary analysis and in-depth interviews to gain findings for extending academic knowledge and for proposing policy recommendations.

1.5 Operational Definitions

Innovation Communication: refers to the art of storytelling, particularly in the context of the narratives surrounding startups (Startup Story). This includes key elements of business outlined in the Business Model Canvas framework, as well as the culture of startups (Startup Culture). Essential components encompass the Mission, Vision, Values, and the Innovation Communication Strategy. This strategy is crucial for managing innovation in three dimensions: Business Model Innovation, Product and Service Innovation, and Process Innovation, aimed at the target groups who are stakeholders in the gains and losses of the innovation process.

EdTech Startup Ecosystem: refers to individuals or entities associated with startups in the education sector. It comprises five main sectors: Entrepreneurial sector, Large Corporate sector, Risk Capital sector, Educational sector (University), and Government sector. Each plays a role in contributing to and influencing the sustainable development of the educational startup ecosystem. These communication and ecosystem principles emphasize the importance of effective storytelling and

collaboration in driving innovation and building a sustainable startup environment in the education sector.

1.6 Expected Benefits

1) To extend academic knowledge about the innovation communication of EdTech startup ecosystem in Thailand that can be used as a model for stakeholders.

2) To obtain policy and practical recommendations about innovation communication for organizations in EdTech startup ecosystem in Thailand.

CHAPTER 2

REVIEW OF LITERATURE AND RELATED STUDIES

The literature review and related studies for the research "Innovation Communication of Edtech Startup Entrepreneur" are as follows:

2.1 Theories and Concepts about Innovation Management

2.2 Theories and Concepts about Communication and Innovation

2.3 Concepts about Startup Entrepreneur

2.4 Related Studies

2.5 Research Conceptual Framework

2.1 Theories and Concepts about Innovation Management

Innovation is defined as ideas, practices, and objects perceived by people as new (Rogers, 1995). Innovation is crucial as it creates a competitive advantage for companies or organizations. Successful innovation can meet at least one of the following conditions: firstly, innovation is based on new principles that challenge traditional management practices. Secondly, innovation operates systematically with a framework of processes and methods. Thirdly, innovation is an integral part of the commitment to continuously develop new products and services (Gershon, 2017).

In general, innovation can be classified into two main types: Sustaining Innovation and Disruptive Innovation. Sustaining Innovation is related to improving the efficiency of products, aiming to enhance or add features to existing technologies or services. This type of innovation is the most common for the majority of companies and often receives more than 80% of research and development budgets. Sustaining innovation is crucial as it develops products better than competitors to protect market share. It also demonstrates a company's commitment to development by attempting to maximize the benefits of existing products or services without significant changes in design and production processes.

On the other hand, Disruptive Innovation involves creating entirely new products and processes that differ from existing ones. It brings about changes in markets and competition by offering a novel value proposition. Managing innovation can be approached through Three-Sided Innovation (Gershon, 2017), which consists of Business Model Innovation, Product Innovation, and Process Innovation. These three types of innovation can be detailed as follows:

2.1.1 Business Model Innovation

Business Model Innovation is related to conducting business with new methods (Kim & Mauborgne, 2005). explain that innovative companies need to consider markets that competitors have not thought of before to create opportunities for growth. This involves developing the concept of the "Blue Ocean Strategy," which creates new market demand rather than competing in existing markets. It aims to establish a market that responds to the potential of new ideas, products, and services.

Gershon (2017) outlines that in the design and development stages of business model innovation, companies should collectively address five fundamental questions:

1) How will the firm create value? Consumers should receive value and benefits from the company's products or services. The development of products or services should align with the company's innovation strategy.

2) For whom will the firm create value? Identify the target audience for the company's products or services. The target audience's level of technological knowledge influences the company's strategies and operations.

3) What is the firm's internal source of advantage? Internal advantage refers to the company's strengths that competitors either lack or have to a lesser extent. It could be in areas such as brand image, technology leadership, efficient production processes, or outstanding services.

4) How will the firm make money? Identify various revenue streams that will contribute to the company's profitability.

5) How will the firm position itself in the marketplace? Determine the competitive positioning, considering both existing and potential new competitors.

Being the first-to-market can create significant opportunities, requiring effective communication about new products and services to the target audience.

However, it also presents challenges in generating interest in entirely new products or services. Successful business model innovation requires a commitment to challenging and solving traditional management issues, presenting new markets in the blue ocean, and embracing a mindset that deviates from conventional thinking. Business model innovation is about offering new value to consumers, setting new standards for others to follow.

2.1.2 Product Innovation

Product Innovation refers to the process of introducing new products or services to the market, including the enhancement of existing products or services. Successful product innovation results in the creation of the first-to-market product, and companies with high innovation demonstrate a consistent commitment to developing their products. In addition to delivering improved products, it poses a challenge to other competitors.

There are three key concepts related to product innovation:

Ideation: Ideation is the creative process to develop new and unique ideas for products. It involves two sub-steps: Idea Generation: Generating a diverse and substantial number of ideas, which can come from both internal and external sources within the organization. Synthesis: The process of discussion, refinement, and selection to narrow down the options.

There are five questions that can be used to transition from the ideation stage to practical implementation:

1) Does the proposed idea fill an obvious gap or niche in the marketplace?

2) Does the idea have shelf life?

3) Will the proposed idea be met with resistance both inside and outside the organization?

4) Is the idea a true stand-alone business, or is it an add-on feature?

5) How much funding will be needed to successfully launch the product or service?

New Product Development: New Product Development is the process of transforming ideas into products or services that can be realistically sold. It is the

responsibility of the project manager to shift plans into action, with strategies related to timely and budgeted operations.

Product Design: Product Design involves blending engineering and artistic activities that lead to the creation of products or services for the benefit of users. Design must strike a balance between aesthetics and the ability to be efficiently produced and distributed.

2.1.3 Process Innovation

Process Innovation is related to creating systems and methods to enhance the efficiency of an organization. Davenport & Short (1990) describe process innovation as a set of systematically organized tasks to achieve desired outcomes, applicable at various stages of business, from product development to manufacturing, inventory inspection, customer service, distribution, and product delivery. The benefits of process innovation include enhancing internal efficiency, cost savings, and improved management of time, personnel, and resources within the organization.

Successful process innovation impacts two main areas simultaneously. First, it leads to the creation of efficiency both internally and externally, resulting in increased value for the organization. Second, it involves leaders applying these innovative processes within their own organizations as they recognize the value they bring.

Process innovation, when effectively implemented, has the potential to revolutionize various aspects of an organization, creating a positive impact on both internal operations and external interactions with customers and stakeholders. This innovation contributes to organizational growth, competitiveness, and the continuous improvement of processes to meet evolving demands.

2.1.4 The Diffusion of Innovation

Rogers (2003) defines “Diffusion of Innovation” as the process by which an innovation is communicated through certain channels over time among the members of a social system. According to this definition, it can be divided into four key components: 1. Innovation, 2. Communication Channels, 3. Time, and 4. Members of a Social System.

1) Innovation: Refers to ideas, practices, and objects perceived as new by people in general. Innovations are generally categorized into two types: Sustaining Innovation and Disruptive Innovation.

2) Communication Channels: Refers to the avenues through which information is transmitted to the target audience. Mass media channels, such as television, may efficiently provide information about new product innovations, while interpersonal communication might be more effective in creating and changing attitudes, leading to decisions on whether to adopt an innovation.

3) Time: Represents the duration taken to decide to adopt a new innovation. For example, comparing the time taken to access telephones in the United States, which took fifty years to reach ten percent of the population, with the internet, which achieved a similar proportion in just five years.

4) Members of a Social System: Refers to groups of people brought together based on geographical proximity, community, work, culture, and religion. Digital media has facilitated the formation of virtual communities, where individuals with shared interests come together, whether in politics, society, religion, or professional activities.

2.1.5 The Innovation Decision Process

Rogers (1995) describes the decision-making process individuals use regarding the adoption, rejection, or delay of new technologies or services. In Rogers' innovation decision process, there are five steps: 1. Knowledge, 2. Persuasion, 3. Decision, 4. Implementation, and 5. Confirmation. The details are as follows:

1) Knowledge: This initial step involves individuals becoming aware of the innovation and related concepts. Sources of knowledge may include friends, colleagues, or family members, as well as traditional mass media such as television, newspapers, and magazines. Additionally, knowledge gained from the internet and various online social media platforms is considered.

2) Persuasion: The goal in this stage is for innovators to influence the target audience to develop an interest in the innovation. The target audience, in turn, forms attitudes toward the innovation based on the knowledge they have acquired. A

critical factor influencing persuasion is Opinion Leadership, referring to individuals who have an impact on group members in society.

3) Decision: This stage involves the selection of various options available to users or consumers. It is the decision-making process of whether to adopt, reject, or delay the use of the offered product. Influencing decision-making are factors such as user resistance, any factors that delay or deter individuals from making purchasing decisions.

4) Implementation: Implementation refers to the actual usage of the product and adapting it to fit into users' behavior.

5) Confirmation: After making a decision and implementing the innovation, individuals may feel the need to confirm that their decision was correct. Confirmation involves demonstrating that the decision was sound, potentially through the full utilization of the product, announcing it through online social media, or continuous integration into daily life.

2.1.6 Rate of Adoption

The Rate of Adoption refers to the time individuals take to consider and decide to adopt new technologies or services. Some users are enthusiasts of technology and are generally curious and eager to try new products, while others may be cautious about adopting new technology. In general, innovators can be categorized into five groups:

1) Innovators: This group is composed of technology enthusiasts who are the first to adopt innovations or new services. Innovators are typically leading individuals in terms of education, income, and professional status. They have a high tolerance for risk, often driven by business interests, research, or personal curiosity. Innovators usually have significant financial resources to respond to their personal and professional needs.

2) Early Adopters: Early adopters are the second group to adopt innovations quickly. Generally, they are younger, well-educated, and have a higher income. Early adopters often hold influential roles such as doctors, lawyers, scientists, engineers, and educators. They seek to access new technology when the opportunity

arises but tend to be more cautious about adopting it. Early adopters often look for thought leaders in their community to guide their decisions.

3) Early Majority: The early majority comprises the majority of the population and is generally interested in new technology and services. However, they tend to adopt at a slower rate due to a cautious approach. Price factors and the product's durability are crucial considerations for the early majority. They typically wait for the next version of the product, which is often similar to the previous one but at a more affordable price.

4) Late Majority: Individuals in the late majority tend to resist change related to new technology. They adopt innovations only after a prolonged period of exposure. Late majority users may exhibit a high level of skepticism and are content with their existing products and services. Resistance may arise from a lack of interest, the perceived complexity of new technology, lack of necessity, or insufficient financial resources.

5) Laggards: Laggards are the last group to adopt innovations. They are generally older and resistant to change, not seeing the necessity to switch unless influenced by friends or family members. Laggards are reluctant to spend money on new technology and prioritize traditional values and customs over grouping considerations.

2.2 Theories and Concepts about Communication and Innovation

Pfeffermann (2011) has identified three main dimensions of research related to the communication of innovations, which are:

1) Marketing of innovation in marketing research
2) Innovation communication in marketing diffusion research
3) Innovation communication in corporate communication research linked to innovation management research

The first research area focuses on marketing, consumer behavior, psychology, and decision-making related to marketing activities. Marketing plays a crucial role in the innovation process, where communication can inform consumers about the

features and advantages of innovations through mass media and personal communication. This eventually leads to the decision to adopt.

The second research area investigates the understanding of the diffusion of innovation from a communication perspective and its relationship with consumers. Social factors influencing the diffusion process include word-of-mouth communication, network externalities, and social signals.

The final research area emphasizes the study of innovation communication and its impact on the innovation process, from ideation to introduction, as part of organizational communication. This framework integrates three communication dimensions: internal communication, external communication, and public relations.

The first two research areas are primarily concerned with marketing activities. The first aims to attract consumer interest, while the second seeks to drive innovation adoption through influence and social factors. Meanwhile, the third research area focuses on communication relevant to the innovation management process as an integral part of organizational communication. This research will primarily emphasize this aspect, with details as follows:

2.2.1 Innovation Communication and Corporate Communication

Innovation Communication is a set of processes for exchanging information between organizations and stakeholders from various perspectives (Pfeffermann, 2011). It encompasses the following dimensions:

1) Presentation of Ideas, Concepts, Prototypes, Practices, Projects, Initiatives, Designs, Issues, or Various Combinations: This is referred to as an "Innovation Cluster," considered to be novel compared to the groups of stakeholders involved.

2) Creation and Emphasis on Context-Issues Related to Innovation and Innovation Clusters: This involves highlighting and focusing on context-related issues relevant to innovation and innovation groups.

3) Presentation of the Innovation Capabilities of the Organization: Communicating the innovative capabilities of the organization is crucial.

4) Consideration of the Timing and Use of Open Communication in Creating Value for the Organization: This involves creating knowledge for

stakeholders, transforming knowledge, building the organization's reputation, and developing strategic asset management, such as information, innovation, and management reputation.

Innovation Communication is related to the strategies, methods, and practices that organizations use to plan, coordinate, execute, control, and evaluate the processes of exchanging information with stakeholders.

Apart from internal communication, financial communication, and marketing/brand communication, Innovation Communication can be integrated into corporate innovation, particularly in cross-functional communication related to managing relationships with stakeholders. This includes public relations, communication with customers and consumers, creating innovative brands, organizational brands, product brands, network brands, and enhancing the organization's reputation through the elements of Innovation Communication.

Pfeffermann (2011) identified eight dimensions related to Innovation Communication, and each dimension has relationships and implications for one another:

1) Information Transmission: Involves the ability to plan, coordinate, execute, monitor, and evaluate the processes of transmitting information related to the organization's innovations.

2) Interrelation: Related to the interrelation of management tasks, communication processes, communication tools, and communication activities.

3) Time-Related Connectivity: Relates to the relationship of information over different periods, including past-related, present-related, and future-related information.

4) Openness: Involves open communication with both known and unknown stakeholders, using networks for communication and utilizing knowledge from both internal and external sources.

5) Knowledge Creation: Relates to learning from existing knowledge and creating new knowledge for stakeholders.

6) Strengthen Innovation Reputation: Involves building trust in innovation over time among stakeholders.

7) Management of Strategic Assets: Involves aligning resource management with the organization's capabilities, such as data management, innovation management, and reputation management.

8) Value Creation: Relates to creating sustainable competitive advantages resulting from communication of innovations that can generate and expand valuable resources aligned with the organization's business opportunities.

2.2.2 Innovation Communication and Corporate Strategy

Innovation Communication is an integral part of Corporate Communication, which is related to Corporate Strategy. The process typically begins with defining the Corporate Mission, Corporate Vision, Corporate Values, and Corporate Objectives. Subsequently, external and internal analyses are conducted to transform these into a Corporate Strategy. This strategy then leads to the development of a Corporate Communication Strategy and an Innovation Communication Strategy.

There are three key Innovation Communication strategies that align with the concept of value creation within the context of organizational communication (Pfeffermann, 2011)

1) Knowledge Value Strategy:

Goal: Systematically increase the knowledge of stakeholders, ensuring continuity to discover new opportunities through the organization's expanding knowledge base.

Implementation: Disseminate knowledge systematically, create and maintain a conducive environment for innovation, and use knowledge to develop new innovations.

2) Profile and Positioning Value Strategy:

Goal: Continuously strengthen the image and reputation of innovation among stakeholders in a systematic and consistent manner.

Implementation: Foster positive perceptions of the organization as an innovative leader, position the organization or collaborative network as an innovation creator, leading to the creation and maintenance of competitive value in the long run.

3) Management Value Strategy:

Goal: Systematically manage the strategic assets of the organization related to innovation communication in a systematic and consistent manner.

Implementation: Communicate innovation-related strategic asset management in a systematic and continuous manner, leading to the creation and maintenance of competitive value in the long run.

Once the strategies and goals are defined, planning and coordination are implemented using various strategic tools such as scenario planning, framing, storytelling, market research, and concept/portfolio mapping. Additionally, sensory communication methods, like using scents, are employed to influence emotions, perceptions, and understanding of innovation.

These strategies and tools collectively contribute to the overall effectiveness of Innovation Communication within the organizational context.

2.2.3 Innovation Journalism

Nordfors emphasizes the importance of communication in the form of journalism and introduces the concept of "Innovation Journalism," which involves analyzing communication that may impact innovation (Nordfors 2004, Nordfors & Ventresca 2006, Nordfors 2009, Uskali & Nordfors 2014). According to Nordfors, journalism serves as the "basic infrastructure" for successful innovation (Nordfors, 2009). Innovation possesses distinct characteristics that are novel and private, and Nordfors defines it as the "adoption of new significant products, improvements, new marketing processes, or new organizational methods in business practices by organizations, or the introduction of new organizations or relationships" (OECD, 2005). Journalists play a crucial role in bringing innovation to diverse audiences and raising public awareness (Nordfors, 2004).

Nordfors highlights the journalist's role in shaping the narrative, explaining the potential impact on public perception. The significance of news is viewed in the context of creating meaning for innovation since news contributes to understanding innovation and generates new knowledge (Nordfors, 2004).

2.2.4 Innovation Communication and Conflicting Stakeholders

Zerfass (2005) emphasis the importance of stakeholder relations which has increased due to the opening up of the innovation process. Stakeholders, encompassing individuals, groups, and organizations affected by a company's goals and decisions, or those capable of influencing them, play a crucial role. Corporate communication emerges as the most suitable avenue for managing these relationships. It elucidates the innovation process, spanning from the initial idea to product and process development and eventual implementation. Corporate communication integrates stakeholders into the innovation process.

Employees face impacts from innovations, potentially leading to new production processes or job losses. Research & Development partners express concerns about their position and revenues when new technologies emerge from various sources. Satisfied customers with existing products may not readily embrace new, potentially more expensive offerings. Additionally, non-governmental organizations (NGOs) and regulatory bodies (politics, administration) serve as vital stakeholders capable of impeding innovation rollout through public protests and legislative actions.

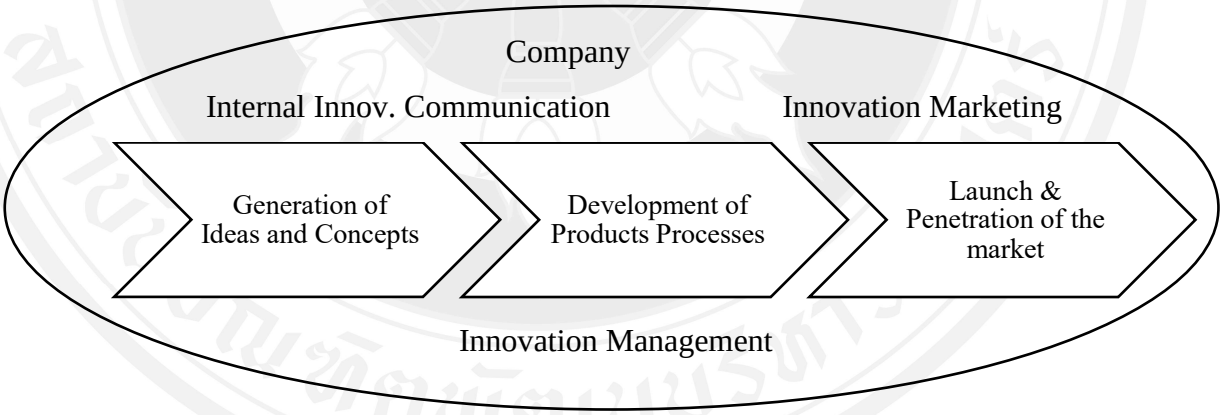

Figure 2.1 Innovation Communication and Conflicting Stakeholders

2.2.5 Conceptual Model of the Role of Communicators in Innovation Clusters……..

A conceptual model is developed by Minshall (2015) based on theoretical insights to explore the communicators' role in innovation clusters. The model aims to

identify, visualize, and structure influence factors. Four classified aspects of influence include Individual Level, Organizational Level, Cluster Level, and Context. The central focus of the model revolves around the role of communicators. This role is shaped by the surrounding Individual, Organizational, and Cluster Levels.

The Individual Level delves into personal attributes of communicators, covering categories such as Socialization (focused on education and career) and Self-Perception (analyzing motivations, aims, contentedness, and communication understanding). The Organizational Level assesses the professional environment, examining Organizational Structures (including professional position, practices, and references) and Work Conditions (focusing on control and values). The Cluster Level provides insights into the innovation cluster, analyzing the cluster's Network (position, collaborations, and stakeholders) and Representation (perceived image, distinctiveness, and evaluation). The three levels are contextualized within a broader Context, defined by the cultural and historical development of the cluster and policies addressing innovation and research.

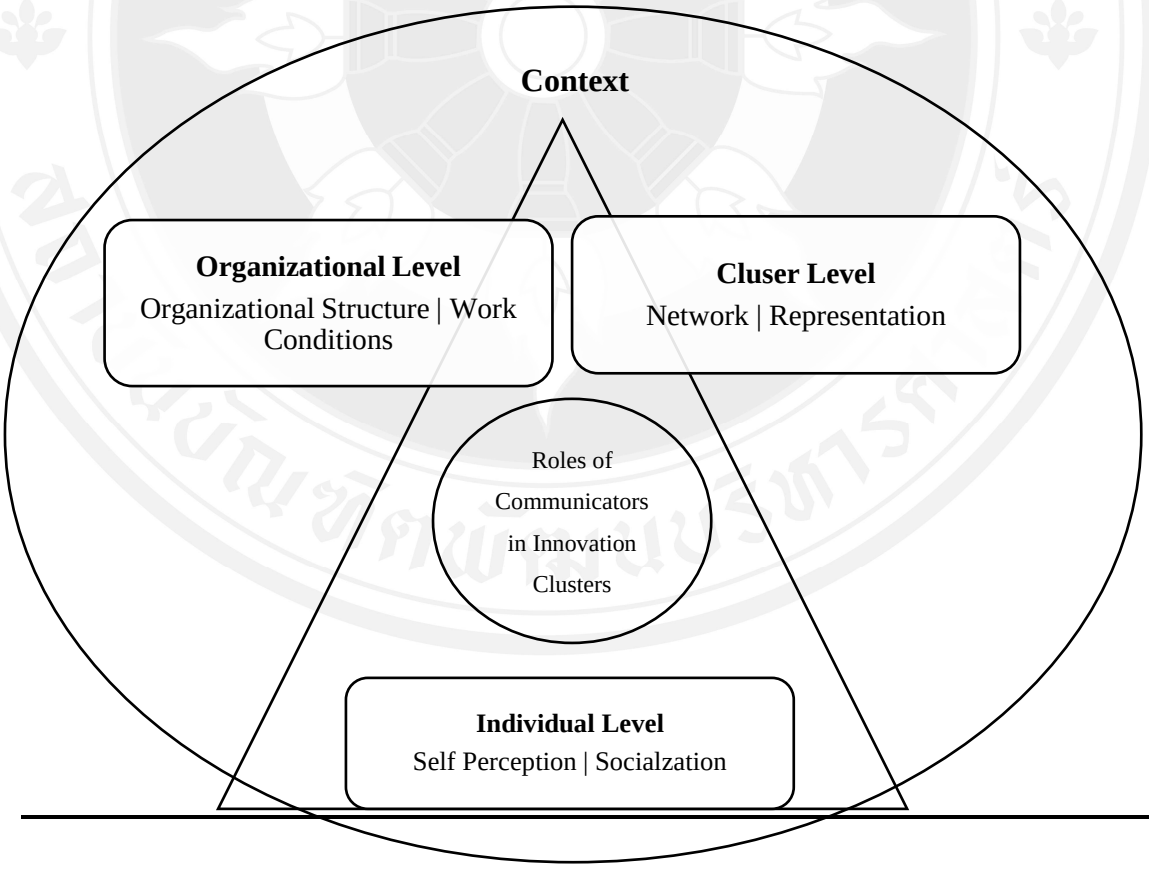

Figure 2.2 Role of Communicators in Innovation Clusters

2.2.6 Corporate Communication

Corporate communication is the total communication activity undertaken by an organization to achieve planned objectives. The role and significance of communication within an organization include aiding in the advancement of the organization's fundamental mission. Effective organizational communication can facilitate the smooth operation of the organization. Good communication within an organization can help eliminate confusing information and counteract the initiation of rumors that may undermine the organization's stability. Particularly, communication through various meetings is identified as a crucial key to achieving effectiveness in the organization's operations (Rungrat Chaisamrej, 2015)

2.2.7 Types of Corporate Communication

Diggs-Brown (2012) classified corporate communication that supports sustainability into six types in different contexts, namely: Intrapersonal Communication, Interpersonal Communication, Small Group Communication, Large Group Communication, Face-to-Face Public Communication, and Mediated Mass Communication. With following details;

1) Intrapersonal Communication:

(1) Individuals communicate with themselves in the process of thinking and decision-making.

(2) Pertains to organizational communication in the dimension of employees' job performance, such as self-reflection for decision-making, planning public relations communications, and composing organizational advertising messages.

2) Interpersonal Communication:

(1) Involves communication between 2-3 individuals.

(2) Occurs in specific situations, relying on direct sensory communication channels.

(3) Nonverbal language plays a significant role in communication.

(4) Information is spontaneous, allowing for easy insertion or topic changes.

(5) Often lacks clear communication objectives.

(6) Less emphasis on pre-prepared messages.

(7) The communicator's role is both formal and informal.

(8) Immediate and intentional or unintentional feedback reactions are common.

(9) Related to organizational communication in the management dimension, such as communication between managers and employees, and interactions like marketing communication between call center staff and customers.

3) Small Group Communication:

(1) Involves communication among at least 3 people.

(2) Communication may be face-to-face or through group communication channels, such as emails or online social media.

(3) The communicator has a clear intention in communication.

(4) Preparation of information may occur.

(5) The communicator may have a formal or informational role.

(6) Verbal language plays a role in feedback reactions.

(7) Related to organizational communication in both the management dimension and external communication, such as team meetings or working group discussions.

4) Large Group Communication:

(1) Involves communication with more than 10 people.

(2) There is a hierarchical order among communicators related to their roles in communication.

(3) Clear goals and objectives in communication.

(4) Formality increases, with less reliance on nonverbal communication.

(5) Feedback is more formal and less immediate, such as providing additional information or expressing opinions.

(6) Related to organizational communication in both the management dimension and external communication, such as collaborative activities between organizations.

5) Face-to-Face Public Communication:

(1) Involves communication with a large group, possibly hundreds or thousands, in a face-to-face setting.

(2) Systematic preparation of information is necessary.

(3) Communication situations require planning and preparation.

(4) Limited feedback from the audience, often nonverbal.

(5) Feedback is formal, such as raising hands to speak through a microphone or writing questions.

(6) Related to organizational communication in both the management dimension, such as town hall meetings, and communication with a large external audience, such as shareholder meetings.

6) Mediated Mass Communication:

(1) Involves communicating with a mass audience, characterized by a large and diverse number of recipients.

(2) Communication relies on various media channels such as television, radio, print, magazines, and the internet.

(3) Communicators often represent the organization, with clear goals and objectives.

(4) Planning and systematic preparation of information are essential.

(5) Feedback through mass media channels can be challenging, with limited immediate responses except for online channels.

(6) Related to organizational communication in the dimension of communicating with a large external audience, emphasizing creating awareness among diverse groups through mass media. Examples include broadcasting organizational activities through TV, newspapers, and websites.

2.2.8 Key Concepts in Corporate Communication

In planning and implementing corporate communication systematically, there are key concepts that can help enhance the effectiveness of organizational communication operations, as follows:

1) Mission: Refers to the organization’s ultimate purpose, aligning with the values or expectations of various stakeholder groups.

2) Vision: Indicates the desired future state and the organization’s aspirational commitment.

3) Corporate Objectives: Signify the organization's stated aims and goals.

4) Strategies: Refer to the approaches or pathways to achieve organizational objectives and make them a reality.

5) Corporate Identity: Encompasses the structure, characteristics, and values that the organization communicates.

6) Corporate Image: Refers to the set of relationships between the presentation of information and the responsive reactions of individuals.

7) Corporate Reputation: Signifies the cumulative impression of various images of the organization formed in the minds of individuals.

8) Stakeholders: Individuals or groups who impact or are impacted by the organization's objectives.

9) Public: Groups of people who express opposition to the organization, typically due to certain issues or concerns.

10) Market: A population group with needs or potential demand for products.

11) Issue: Unresolved matters ready for decision-making, potentially causing conflicts between the organization and the public or one or more groups.

12) Communication: Techniques and various media used by the organization to communicate internally and externally.

13) Integration: Coordination of all communication to consistently and effectively convey the organization's identity to both internal and external groups.

2.2.9 Corporate Communication Stakeholders

Stakeholders are various groups with a vested interest in the organization from different perspectives. Therefore, stakeholders encompass diverse individuals who share similar goals or have mutual interests. This involvement can arise from being formal members collaborating officially with continuous relationships, such as organizational employees, shareholders, or informal groups loosely connected to the organization, for example, consumers or the general public. Stakeholders can be broadly categorized into two main groups: Internal Stakeholders and External Stakeholders. Details are as follows:

1) Internal Stakeholders:

(1) Management: This includes both senior and mid-level management.

(2) Staff and Employee: Encompassing regular employees and organization-affiliated contractors, excluding those who are less directly associated with the organization than employees.

(3) Union or Employee Organization: Refers to officially organized employee unions, including groups that collaborate specifically on certain activities.

(4) Shareholder: This group is specific to cases where individuals hold a significant portion of shares in a public company or in the case of a limited company where shareholders hold a clearly defined proportion.

2) External Stakeholders:

(1) Investor and Shareholder: Investors and shareholders form a community with a crucial role in fundraising to support the organization's growth, especially for large businesses. This community also includes potential investors who may become major shareholders in the future.

(2) Supplier: Encompasses various entities related to supplying raw materials or supporting resources in the organization's production processes, including physical resources, labor, knowledge, expertise, technical equipment, and directly imported raw materials.

(3) Government Executive and Officer: Directly involved in supporting the organization through government decisions, including policy, regulations, information, and the determination of various activities to support business at local or national levels.

(4) Surrounding Community: Resembles neighbors with close relationships to the organization, acting as both providers and recipients. This includes all community members residing or sharing spaces around the main office, branches, or production facilities spread across different regions.

(5) Interest Group/Community: Encompasses both grassroots communities and non-profit private organizations operating for specific purposes, either aligned or not aligned with the organization's business direction. Additionally,

broad networked communities may form online social networks, influencing the opinions and expressions of stakeholders from other groups.

(6) Distributor/Trader: Various types of businesses rely on distributors who act as intermediaries between companies and consumer groups. Distributors play a significant role as key trading partners, particularly for fast-moving consumer goods (FMCG) businesses.

(7) Customer, Consumer, and Prospect Customer: Customers or product buyers are crucial stakeholders who impact the success of a business beyond reputation. Organizations should consider covering potential customers in addition to current customers, expanding the scope to those with the potential to become direct customers in the future.

(8) Media or Mass Media: While mass media may have a smaller number compared to other stakeholder groups, considering the influence of mass media as mediators in disseminating news and guiding public opinion is crucial for the organization.

(9) General Public: Refers to the general population not directly involved in any specific aspect of the organization but includes citizens who are society members, requiring genuine consideration due to their large numbers, demographic diversity, and socio-economic status, which may influence the organization's operations positively or negatively.

2.3 Concepts about Startup Entrepreneur

Startup refers to a temporary organization designed to explore repeatable and scalable business models (Blank, 2012). Ries (2014) describes startups as institutions designed to deliver new products or services under highly uncertain circumstances. Graham (2012) states that startups are companies designed to grow rapidly.

Meanwhile, the National Innovation Agency (2018) has defined startups or initial businesses as small-sized enterprises that are growing and utilizing innovation in producing goods and services. When considering this definition, each country may have important criteria for consideration, including:

1) Characteristics of the Business: Organizations that are small-sized and innovative, meaning startups are small-sized businesses in their early stages of operation, driven by technology-based innovation. This leads to rapid growth and the creation of new products or results in a novel format that influences society broadly. However, the outcomes may be similar but differ in production processes or presentation formats.

2) Duration of Business Operations: This considers time as a determining factor for startups, as these businesses, in their early stages, are likely to receive assistance from the government or other relevant parties. Therefore, a specific timeframe needs to be defined for the operations to be considered a startup. For example, businesses operating for no more than 5 years may be considered startups. However, the conditions of this timeframe need to be considered in conjunction with other criteria.

3) Annual Performance of Startup: In some countries, there are criteria set for the annual performance of startups, as financial support or assistance is provided. Therefore, the state must establish these criteria because financial support cannot be provided to every business.

For Thailand, due to the legislation supporting medium and small enterprises (SME) already in place, defining a startup must be considered alongside the SME definition since they are closely related. Although both are businesses that are newly established and small in size, they differ significantly in business growth and funding methods. SMEs tend to grow steadily and expand their businesses in traditional ways, such as increasing investment in assets or borrowing from financial institutions for additional investments. This results in slower business expansion compared to startups, which focus on rapid and leapfrogging growth. They achieve this by utilizing technology to reduce costs and rapidly expand their market.

Aulet (2013) explains the differences between entrepreneurs of the two types. The first type is entrepreneurs of medium and small-sized businesses (Small and Medium Enterprise - SME). Typically, these are businesses started by individuals to meet local market needs and later grow into medium-sized enterprises. These businesses are often owned by a few individuals or family businesses since close control and supervision are required. Generally, founders receive returns in the form

of independence and cash flow from the business. These businesses usually do not require substantial capital, and when capital is injected, there is an increase in income and employment over time. Additionally, they have a variety of location choices, and the created jobs are often irreplaceable and cannot be easily transferred elsewhere to reduce costs. These businesses mostly provide services or retail products of other companies.

On the other hand, Innovation-Driven Enterprises (IDE) entrepreneurs are in businesses with higher risks and broader market targets than local markets. They aim to sell products globally or at least at a regional level. These entrepreneurs often work in teams and establish businesses based on innovative technology, processes, or new business models. They seek to grow by selling shares of the company to fund their growth. Although it takes longer for them to emerge, once they attract more customers, these businesses tend to grow rapidly. They are interested in accumulating wealth, controlling the company less, and raising funds by selling shares to drive growth. They must grow rapidly and continuously to respond to global markets effectively. IDE businesses create replaceable jobs that can be outsourced to reduce costs. The location of IDE businesses is less geographically diverse and often clusters with similar innovative companies. Moreover, the injected investment takes a longer time to generate income or hire more employees.

A robust economy comprises both types of businesses, each having its strengths and weaknesses, with no type clearly superior. Success depends on diverse thinking and skills that complement each other.

Blumberg (2013) explains that the primary responsibilities of startup entrepreneurs are just threefold. Firstly, it involves crafting a comprehensive vision and strategy and effectively communicating it to all stakeholders. Secondly, it entails selecting, hiring, and retaining the best employees for the company. Lastly, it requires ensuring a constant and sufficient flow of funds. These concepts have been transformed into a framework to guide startup entrepreneurs, consisting of three components: 1. Storytelling, 2. Building the Company’s Human Capital, and 3. Execution, which emphasizes management and financial aspects.

In this research, the focus is on the first component, which is Storytelling. Blumberg (2013) elaborates that storytelling is akin to a startup itself, as it is a way of

painting a picture for people to envision the future. It encourages individual participation, whether through investing, purchasing products, or applying for employment with the company. It involves main characters (customers or users) and supporting characters (investors, employees, co-founders, competitors). The story has a starting point (the problem), a middle (the product), and an end (problem-solving). The entrepreneur's storytelling begins by identifying the problem customers face and presenting the company's team's solution. Subsequently, it involves the process of testing the story in the actual market and adapting the planned strategy to turn that story into a real business. The steps include: Identifying the Problem: Recognizing the challenges customers encounter. Presenting the Solution: Introducing the company team's proposed solution to the problem. Testing the Story: Verifying the narrative in the real market. Adapting the Plan: Modifying the laid-out plan to materialize the story into an actual business. This approach ensures that the entrepreneur's vision is not only communicated effectively but is also translated into a compelling and viable business story.

1) Defining and Testing the Story: As entrepreneurs, the stories we have in the early stages often contain errors, but we cannot identify these errors without testing assumptions. Startup entrepreneurs lack abundant resources like large organizational managers, so it's essential to find ways to test assumptions without consuming excessive resources and time. Ries and Blank, as cited in Blumberg (2013), explain that failures in the startup initiation phase are expected and should be incorporated into the process rather than viewed as problems when they occur. The Lean Business Model Canvas by Maurya (2010) is proposed for testing assumptions and finding business models. This model consists of nine components: Problem, Customer Segments, Unique Value Proposition, Solution, Channels, Revenue Streams, Cost Structure, Unfair Advantage, and Key Metrics.

2) Telling the Story to Your Investors: Investors are interested in a concise elevator pitch that explains the problem, solution, and target customer group clearly and intriguingly. They want to know the size of the opportunity, the company's competitive advantage, current status, and the roadmap from today. Additionally, investors need insights into the team's strength and a summary of

financials, detailing revenue expectations, customer growth, product costs, and marketing expenses.

3) Telling the Story to Your Team: Entrepreneurs need to communicate the company's mission, vision, values, and goals to the team. This can be done through a top-down approach, where founders define the narrative, a bottom-up approach, involving employees in crafting the company culture, or a hybrid approach combining both. The team should understand why the company exists, how it behaves, what it does, how it will succeed, and what is currently most important.

4) Revising the Story: Survival in the startup world depends on the ability to revise the story when facing challenges. Denying harsh realities can lead to failure, and sometimes a pivot is necessary for survival and growth. Signals for change may include data disproving initial assumptions, poor results, or internal noise.

5) Bringing the Story to Life: Creating a company's culture involves being intentional about every aspect, including geography, office type, systems, driving forces, staffing and compensation, policies about time off, expenses, communication patterns, and personal acknowledgments. Attention to these details helps bring the story to life and shapes the company's culture.

In the section discussing key concepts related to managing innovation for startups, the researcher has compiled the following preliminary insights:

1) Startup Metrics for Pirates – A-A-R-R-R: McClure, as referenced by Wilas Chumlers, introduced the concept of Startup Metrics for Pirates-A-A-R-R-R. This framework helps understand quantitative data related to the product and services:

(1) Acquisition: How customers find the product.

(2) Activation: Whether customers are impressed.

(3) Retention: Whether customers come back.

(4) Revenue: How the startup makes money.

(5) Referral: Whether customers recommend the product.

2) Objectives and Key Results (OKRs): OKRs are divided into two main parts: Objectives (Where) and Key Results (How). It is a goal-setting method for individuals to motivate work and align with the company's vision. Team members set their OKRs, promoting ownership and alignment with company values.

3) Lean Startup: The Lean Startup approach comprises three key components: Build-Measure-Learn.

(1) Build: Quickly develop a product from an idea, not necessarily complete but good enough to captivate customers. This prototype, known as Minimum Viable Product (MVP), should be usable.

(2) Measure: Define various metrics to measure whether the outcomes align with expectations.

(3) Learn: Analyze the gathered data to guide product improvement.

4) Pivot: Pivoting should be vision-driven rather than just testing-driven. Types of pivots include:

(1) Zoom-in Pivot: Transformation from a feature or component into a full-fledged product. It involves developing a part of the product further to become the primary focus.

(2) Zoom-out Pivot: The reverse of a zoom-in pivot. Here, a product that was initially considered as a whole is redefined as a feature or component of a larger product or service.

(3) Customer Segment Pivot: Shifting focus to a different customer group than originally targeted. This pivot recognizes a more suitable customer segment that may have different needs or preferences.

(4) Customer Need Pivot: Adjusting the product based on a deeper understanding of customer needs. It involves altering the features or functions to better meet the real and perceived needs of customers.

(5) Platform Pivot: Transitioning from a product to a platform or vice versa. This involves changing the nature of the business from a standalone product to a broader ecosystem or from a platform to a more focused product.

(6) Business Architecture Pivot: Changing the way the business operates fundamentally. This could involve altering the revenue model, profit margin strategy, or the balance between high-margin and high-volume operations.

(7) Value Capture Pivot: Changing the way a startup captures value or makes money. It involves modifications to the revenue model, such as

shifting from a subscription-based model to transaction-based, or providing services for free.

(8) Engine of Growth Pivot: Adjusting the strategy for how the startup grows. This might involve shifting from one growth model to another, such as transitioning from viral growth to paid growth.

(9) Channel Pivot: Changing the way a product is delivered to customers. This could involve switching from online sales to a retail model or vice versa.

(10) Technology Pivot: Changing the underlying technology that powers the product or service. This pivot might involve adopting new technologies or abandoning existing ones in favor of more suitable alternatives.

5) Design Thinking: Design Thinking is a process that revolves around understanding various problems by placing the user at the center. The Stanford d.school's five main steps are Empathize, Define, Ideate, Prototype, and Test. Meanwhile, the UK Design Council follows four steps: Discover, Define, Develop, and Deliver. Both approaches aim to gather insights and create innovative solutions.

2.3.1 The Startup Ecosystem in Thailand

The startup ecosystem comprises various components that work together, each playing distinct roles in different dimensions. These dimensions include:

Government Dimension: The government plays a role in oversight, support, and coordination through legal considerations, regulations, and collaboration among agencies. Examples include the National Innovation Agency (NIA), the Office of Small and Medium Enterprise Promotion (OSMEP), the National Science and Technology Development Agency (NSTDA), and the Department of Business Development under the Ministry of Commerce.

Investor and Financial Institutions Dimension: Investors and financial institutions, both domestic and international, provide capital to support startups in business development and market expansion. This support can come in the form of grants, non-profit investments, or high-risk investments seeking high returns in the future.

Education Dimension: Educational institutions focus on research and produce skilled individuals at all levels, from schools to universities and vocational colleges. Collaboration with governmental bodies and startups helps extend research work and intellectual property for commercial and entrepreneurial purposes, fostering an innovative entrepreneurial mindset.

Support Organizations Dimension: Support organizations, such as incubators and accelerators, concentrate on nurturing innovation from the early stages when businesses are still in their formative phases. Incubators focus on the initial development, while accelerators emphasize rapid growth. These entities may operate independently or receive support and management from investors, government agencies, or private companies.

Private Sector Dimension: Large corporations in the private sector contribute by providing support, advice, and investments in startups. Corporate-startup partnerships are formed to encourage innovation and mutual growth.

Media Dimension: Various media outlets play a role in publicizing startups, reaching users, customers, and investors. This aids in creating networks within the startup community.

Association Dimension: Associations related to various industries and interests contribute to building sub-networks within the startup community.

Each component focuses on different aspects of startup operations and growth stages. With the technologies available today, the startup ecosystem is not limited by geographical boundaries and can be viewed globally. However, the distinct cultural, investment, and entrepreneurial mindset differences in each country often result in unique patterns of growth and development for startups.

The Office of the National Higher Education, Science, Research, and Innovation Policy Council collaborates with the Thailand Tech Startup Association (TTSA) to unveil the results of the Startup Ecosystem Survey in Thailand for the year 2018 (Startup Ecosystem Survey: Thailand 2018). The survey collected data on 215 startups in Thailand, revealing that the majority of startups are in the Seed round, receiving investment from accelerators or angel investors, accounting for 45.58%. The next in line is Series A, receiving significant investment from venture capital for

the first time, at 24.19%, followed by Pre-seed round, receiving investment from the government, relatives, and close individuals, at 16.74%.

In terms of startup industries, Business/Services Tech dominates at 23.72%, followed by E-Commerce at 10.70%, and EdTech at 7.91%. The average age of entrepreneurs when starting their businesses is 33 years, with 81.64% being male and 18.36% female. Regarding participation in government programs and promotional measures, 56.48% of startups have participated, while 43.52% have not. Among those who participated, the highest participation is in the Startup Voucher program by the National Innovation Agency (NIA) at 28.91%, followed by the Innovation Coupon program by the National Innovation Agency (NIA) at 23.44%, and the TED Fund program by the Ministry of Science and Technology at 11.72%. The primary benefits startups gained from participating in these programs are funding (53.33%), networking (20.00%) 2, and branding (11.28%).

For revenue generation, 63.72% of startups have started generating revenue, with 40% of them doing so within the first 6 months of establishment. The highest revenue source is from selling products or services, with 59.12% earning less than or equal to 500,000 Baht per month, and 17.52% earning between 500,000 to 1,000,000 Baht per month. The top three revenue sources are product sales (50%), marketing commissions (16%), and intermediary fees (11%).

In terms of research and development (R&D) and innovation activities, startups allocate an average budget of less than 500,000 Baht per year. The most common collaboration for R&D and innovation is with state universities (20.40%), followed by private companies (19.80%), and general state agencies (13.37%). The main forms of collaboration include consultation and advice (64.81%, 67.86%, 76.74%, respectively) and joint research (22.22%, 17.86%, and 9.30%, respectively). The predominant technology used is Software Application (SaaS)/Web Application at 64.22%, mainly developed or discovered by the founders (25.08%). Other key technologies include Artificial Intelligence (AI)/Machine Learning at 9.79% and AR/VR at 5.20%, primarily researched in-house.

Regarding government assistance, startups' top priority is support for increased funding sources and investment collaboration (40%), followed by addressing legal regulations and business operation criteria (30%), and enhancing tax

incentives and support measures (20%). In terms of private sector support, the primary need is for network building (37.22%), followed by assistance in technology knowledge (29.44%), and training for business understanding (13.89%). The main long-term goals for startups are holding majority ownership (37.22%), followed by IPO (29.44%), and selling the business and transitioning to an investor role (13.89%).

2.4 Related Studies

The concept of an Innovation Driven Enterprise (IDE), as presented by Aulet and Murray (2013), focuses on utilizing innovation to create businesses capable of growing and succeeding on a global scale. This approach differs from starting small and medium-sized enterprises (SMEs). The IDE concept emphasizes the creation of an ecosystem that elevates ideas into sustainable and globally successful businesses.

The MIT Regional Entrepreneurship Acceleration Program (MIT REAP, 2012), serves as a framework for promoting the ecosystem of innovation-driven enterprises in various regions. It consists of three main pillars: System, Strategy, and Stakeholders. The System refers to enhancing the innovation and entrepreneurial capacity of a region by bringing together entrepreneurs in focused clusters. The Strategy involves acceleration, mentorship, and fostering competition. Stakeholders include five components: Universities, Government, Entrepreneurs, Large Corporations, and Risk Capital.

In summary, IDE focuses on leveraging innovation for global success, while MIT REAP provides a framework to promote innovation-driven enterprise ecosystems through enhancing capacity, adopting strategic approaches, and engaging various stakeholders such as education, government, entrepreneurs, large corporations, and risk capital.

The analysis of the stakeholder ecosystem in the context of innovation-driven enterprises, as per Majava (2016), is a study focused on stakeholders of organizations that drive innovation. These stakeholders include funding organizations, universities, and research institutions, playing a crucial role in the innovation and new product development process in Oulu, Finland. The research presents findings categorizing stakeholders according to innovation development phases: 1) Idea Generation and

Technology Development, 2) Early Stage Work to Support Commercialization (IP Protection/Exploring Potential Applications), 3) Start-up Establishment, 4) Seed/Early Stage Funding, 5) Growth Phase/Later Stage Funding, and 6) IPO, Acquisition, or Merger. It emphasizes the need for continuous communication and collaboration among all stakeholders to foster new innovations.

The assessment of the regional innovation-driven enterprise ecosystem using the Global Entrepreneurship and Development Index (GEDI) framework is illustrated in the case of Scotland (Levie, J. & Autio, E. 2013). This study aims to rank and evaluate the innovation entrepreneurship system of Scotland concerning competitor countries, including innovation-driven economies, the United Kingdom, and the Arc of Prosperity countries (Denmark, Finland, Iceland, Ireland, Norway). The evaluation provides insights into how Scotland's entrepreneurial ecosystem compares globally in terms of innovation and development.

2.4.1 EdTech Ecosystem Model

The EdTech Ecosystem Model was developed in 2019 by the Omidyar Network, an impact investment organization founded by Pierre Omidyar, the founder of eBay, and Pam Omidyar. It is a part of the Education Initiative, aiming to unlock human potential through learning that sparks people, ideas, and systems, enabling everyone to grow and participate in a changing world, relying on each other. Utilizing an ecosystem model allows a shift from a product-focused approach designed to address individual user problems to a systemic approach that seeks to unlock potential within the ecosystem.

The EdTech Ecosystem Model comprises 16 components in 4 categories:

1) EdTech Supply and Business Models:

(1) Business models with effective marketing, sales, and distribution mechanisms for accessing customers, both Business-to-Government (B2G) and Business-to-Consumer (B2C).

(2) Clear objectives and user-friendly methods for users to choose products that meet their needs.

(3) EdTech entrepreneurs can access funding through suitable business models to survive and grow.

(4) Collaboration between industry sectors, both public and private, supporting access, usage, and the impact of EdTech products and services.

2) Enabling Infrastructure:

(1) Access to digital and mobile devices at home and in the community.

(2) Universal internet access through various means.

(3) Initiatives to establish basic network infrastructure for school connectivity at affordable and reliable prices.

(4) eGovernment projects connecting schools through management platforms, which can also be used for EdTech.

3) Education Policy and Strategy:

(1) Clear vision and strategy for EdTech from the highest levels of government.

(2) High-performance expectations, inspiring efficiency improvements, and ensuring legal compliance in EdTech content development.

(3) Curricula and education policies, including expectations for technology literacy for teachers and students.

(4) Funding sources for equal opportunities for EdTech procurement and usage support.

4) Human Capacity:

(1) Local visionary leaders emerge to coordinate stakeholders toward common goals.

(2) Continuous and equal opportunities to build the capacity of stakeholders.

(3) Partnerships and support groups, including quality expansion support for EdTech.

(4) Various effective communication methods for product effectiveness, research, evaluation, and user experiences.

This comprehensive model emphasizes collaboration among diverse stakeholders, encouraging a shared vision and strategic alignment to unlock the potential of EdTech within the ecosystem.

2.5 Research Conceptual Framework

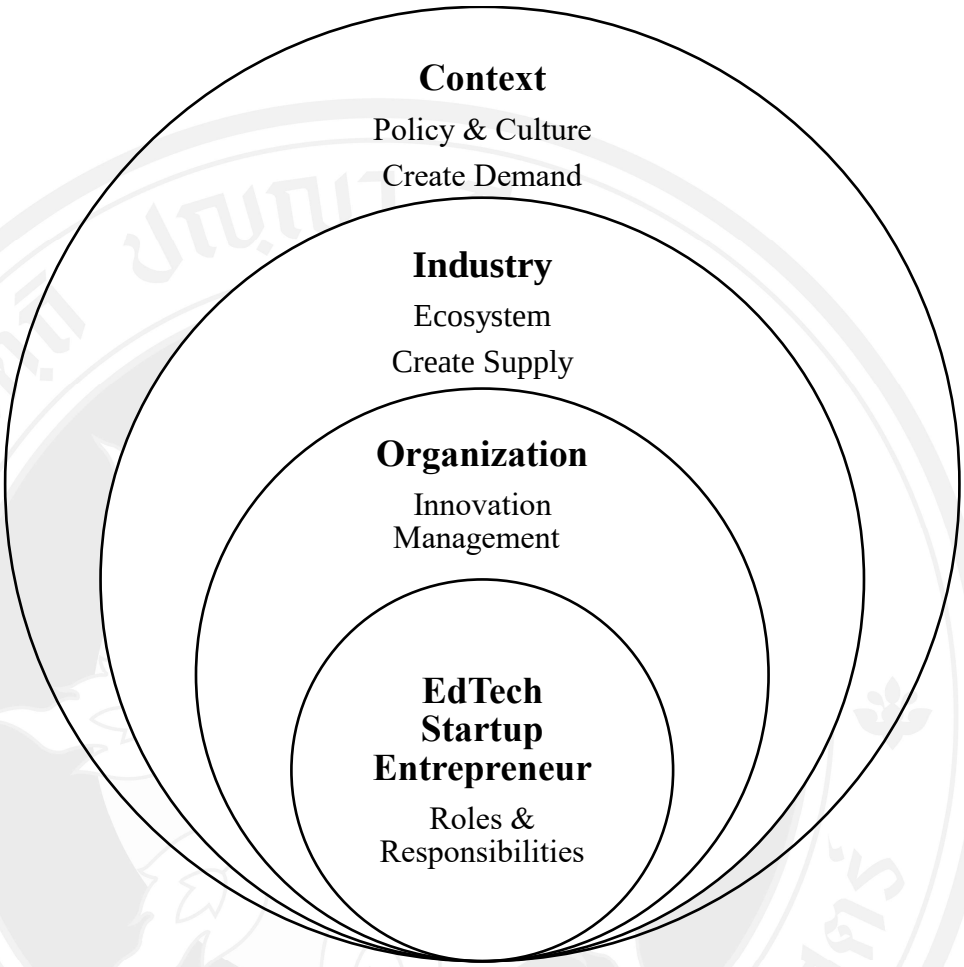

Figure 2.3 Research Conceptual Framework

CHAPTER 3

RESEARCH METHODOLOGY

The research “Innovation Communication of Edtech Startup Entrepreneur” aimed to study the innovation communication of EdTech startup ecosystem in successful countries and Thailand. The study was conducted by qualitative research, which was divided into two part, as follows:

Part 1: The study of innovation communication of EdTech startup ecosystem in successful countries by documentary analysis from public records of the United States of America, the People’s Republic of China, and the Republic of India.

Part 2: The study of innovation communication of EdTech startup ecosystem in Thailand by in-depth interviews with key informants.

After that, the analyzed and obtained information was combined with the theoretical concepts from the review of literature and connected toward the issues to be studied. The presentation of this chapter is as follows:

3.1 The Selection or Sampling of Information Sources, Interviewees, and Research Experts

3.2 Research Tools

3.3 The Validation of Research Tools

3.4 Data Collection

3.5 Data Analysis

3.1 The Selection or Sampling of Information Sources, Interviewees, and Research Experts

3.1.1 The Study of the Innovation Communication of EdTech Startup Ecosystem in Successful Countries

Three countries were selected as the successful countries in the innovation communication of EdTech startup ecosystem based on the numbers of EdTech startup

with highest valuation and vibrant ecosystem: the United States of America, the People's Republic of China, and the Republic of India.

Coursera, Duolingo, and Udemy from the United States of America; Yuanfudao, Zuoyebang, and VIPKID from the People's Republic of China; BYJU'S, Unacademy, and Vedantu from the Republic of India.

3.1.2 The Study of the Innovation Communication of EdTech Startup Ecosystem in Thailand

Key informants were selected by purposeful sampling from experts in the related fields base on the research objectives as this study required key informants with higher knowledge and experience than general sampling. The details of the key informants are as follows:

1) Globish: Founded in 2014 by Chuencheewan Wongsaeree and Takarn Ananthothai, Globish is an English language learning institution for working adults. Utilizing face-to-face teaching technology with international tutors through online learning systems available 24/7, the program includes e-learning and workshops for conversational practice. With over 500 teachers, the learning format is certified by Education Alliance Finland. Globish emerged victorious in the "Flying Tiger" TV show on GMM ONE, joined the DTAC Accelerate Batch 5 program, and was honored with the Founder of the Year award at the ASEAN Rice Bowl Awards in 2018.

2) Conicle: Founded in 2014 by Nakorn Phuekphiphatmet, Conicle is a learning platform for organizations. It allows employees to update their knowledge and skills through the app, acting as a bridge between HR and various departments, delivering content and crucial information for learning anywhere, anytime. Clients include AIS, King Power, and PTT. Conicle is one of the companies participating in the Stormbreaker Venture Batch 2 program and AIS The Startup.

3) OpenDurian: Founded in 2013 by Chula Pittayapinan, Pairote Jeebjua, and Charong Buachan, OpenDurian is an online tutoring platform focusing on exam preparation for tests such as TCAS, TOEIC, and IELTS. It participated in the Stormbreaker Venture Batch 1 program and received support from 500Tuktuks in 2019.

4) National Innovation Agency (NIA): Established in 2003, the National Innovation Agency (NIA) is a public organization with a vision to be the primary agency in fostering the national innovation system, enhancing sustainable value. Its mission includes promoting the creation of a national innovation system, providing access to and benefiting from innovation infrastructure, and elevating the skills and innovation capabilities of the target group.

5) The Story Thailand: The Story Thailand is an online media platform showcasing the business narrative of Thailand, emphasizing content related to adapting to the digital disruption era. This includes the transformation of large-scale business organizations, the emergence of startups, the development of technology and innovation for business competitiveness, and the digital lifestyle trend connecting people with technology.

3.2 Research Tools

3.2.1 The Study of the Innovation Communication of EdTech Startup Ecosystem in Successful Countries

The research tool used in this part was for the qualitative research for analyzing documents. A coding sheet was applied for the data on the innovation communication of EdTech Startup ecosystem in successful countries. The outline of the questions was as follows:

1) Content Level
   (1) Political
   (2) Economic
   (3) Sociocultural
   (4) Technological
2) Cluster Level
   (1) Entrepreneur
   (2) Corporate
   (3) Government
   (4) University
   (5) Risk Capital

3) Organizational Level

(1) Company Profile/History

(2) Business Model Canvas

(2) Vision/ Mission/Values

(3) Internal Communication

(4) External Communication

3.2.2 The Study of the Innovation Communication of EdTech Startup Ecosystem in Thailand

The research tool used in this part contains open-ended questions covering research problems for collecting opinions of the interviewees or key informants of each group. The outline of the question is based on the information reviewed from the theoretical concepts and related studies, as follows

For analyzing the key informants opinions were collected and analyzed thoroughly. After that, they were synthesized with the data from documentary analysis for conclusion and recommendations on the innovation communication of EdTech startup ecosystem in Thailand.

As the research tools of this study were divided into two parts; the interview guide used for interviewing and a recording tool. Besides, for collecting data systematically while listening to the interviewees opinions, a voice recorder, and video recorder, including a notebook, for writing what was observed and interviewed in both verbal and nonverbal language were used.

1) Questions regarding the personal information of the interviewee, such as background, educational history, work experience, and motivations for becoming an entrepreneur, etc.

2) In your perspective, what is EdTech, and how is it important for Thailand?

3) What are your roles and responsibilities as an entrepreneur in an EdTech startup?

4) How does your company establish its vision, mission, and values?

5) How does your company identify and manage internal and external stakeholders, and who are involved in the organizational ecosystem?

6) From your point of view, what is innovation, and how is it crucial for a company?

7) How does your company approach innovation management, including business model, product, and process innovation?

8) Does your company have a corporate communication strategy? If yes, what is the organizational structure, departments, and responsibilities involved?

9) What strategies do you employ for internal communication with co-founders and/or executives? (Objectives, content, methods, channels, evaluation, and measurement)

3.3 The Validation of Research Tools

The tools used in the qualitative research were validated for their validity and reliability, Triangulation Validation was conducted before the analysis, as follows:

Method Triangulation was conducted to ensure the congruence of the data from different research methods; documentary analysis and in-depth interviews, including other supporting information.

Data Triangulation was conducted to ensure that the data obtained from different sources were similar or the overall findings from different sources were congruent.

Theory Triangulation was also conducted to ensure that the use of a variety of concepts and theories can reflect the validity and reliability of the information.

3.4 Data Collection

The study “Innovation Communication of EdTech Startup Entrepreneur” was qualitative research, conducted by documentary analysis and in-depth interviews with key informants working or having experience in related areas. The data was collected from the following sources:

1) Primary Source: For collecting documentary data, a coding sheet was prepared to gather all findings for convenience in analyzing the situations and the innovation communication of EdTech Startup ecosystem in successful countries.

Personal data was collected by an interview from the experts who were key informants working or having experience in related areas. The questions were obtained from theoretical concepts and secondary sources. The interviewees were contacted in advance by letter introducing the research project, the objectives, and the study methods. After being permitted, a summary report and questionnaire were sent out for data collection. The questions are semi-structured.

2) Secondary Source: Information was searched from books, textbooks, articles, journals, concepts, theories, thesis, related studies, and information from online media.

3.5 Data Analysis

3.5.1 The Study of the Innovation Communication of EdTech Startup Ecosystem in Successful Countries

Data were analyzed in the for of descriptive research from public records of organizations related to EdTech startup ecosystem in the United States of America, the People's Republic of China, and the Republic of India.

3.5.2 The Study of the Innovation Communication of EdTech Startup Ecosystem in Thailand

Information obtained from in-depth interviews was analyzed to explore the innovation communication of Edtech Startup Ecosystem in Thailand. The data was analyzed and presented in the form of descriptive research based on the reviewed concepts, theories, and related studies, which were research conceptual frameworks.

CHAPTER 4

RESEARCH FINDINGS FROM DOCUMENTARY ANALYSIS

The study “Innovation Communication of EdTech Startup Entrepreneur” was conducted by qualitative research through the documentary analysis from public records of organizations related to EdTech startup ecosystem in three successful countries, namely the United States of America, the People’s Republic of China, and the Republic of India, with details as follows: Coursera, Duolingo, and Udemy from the United States of America; Yuanfudao, Zuoyebang, and VIPKID from the People’s Republic of China; BYJU’S, Unacademy, and Vedantu from the Republic of India. The analyzed content was divided into Context Level, Industry Level, and Organizational Level.

4.1 The United States of America

4.1.1 Context Level

At context level, the analyzed content are political, economic, sociocultural, and cultural aspects of each country.

4.1.1.1 Political

The USA is a federal constitutional republic, which means that each state has a certain degree of autonomy in terms of regulation and policy. There is a stable political environment in the USA, with a two-party system that is relatively predictable. The government has implemented policies and regulations that support entrepreneurship and innovation, including tax incentives and grants. (WENR, 2020)

4.1.1.2 Economic

The USA has the largest economy in the world. The economy is diverse and is driven by sectors such as healthcare, finance, technology, and manufacturing. There are high levels of income inequality in the USA, which can impact consumer behavior and demand for certain products and services. (World Bank, 2020)

4.1.1.3 Sociocultural

The USA is a diverse country, with a population of over 330 million people. There are different cultural norms and values across the country, which can impact consumer behavior. There is an increasing awareness of social and environmental issues among consumers, which can impact demand for products and services. (UN Stat Hub, 2022)

4.1.1.4 Technological

The USA is a leader in technological innovation, with many of the world's largest tech companies based in the country. There is a high level of investment in research and development, particularly in the areas of artificial intelligence, biotechnology, and renewable energy. There are concerns around data privacy and cybersecurity, which can impact consumer trust in technology products and services. (OECD, 2019)

The initiation of high-level state policies, coupled with continuous budget support, has led to significant access to EdTech infrastructure. Direct marketing by major hardware and software companies has resulted in a substantial increase in access to computers and the use of various programs. Projects leveraging widespread internet access serve as a bridge connecting home and school learning, bringing about clear impacts and changes for students. This includes the development of teacher professions, counseling platforms, and Open Education Resources. The EdTech market is expected to have a high value of up to 9 billion US dollars, with products increasingly meeting individual student needs (Omidyar, 2019).

Table 4.1 Key Development Milestones in Educational Technology in the United States

Year	Milestones
1983	The National Commission on Excellence in Education released the book "A Nation at Risk," which recommends that all high school graduates should have an understanding of computers, electronics, and related technologies.
1994	The "Educate America Act" and the "Improving America's Schools

Year	Milestones
	Act" mandate that states establish consistent standards and testing procedures.
1996	The federal government launched the National Educational Technology Plan, providing recommendations and funding for equal access to the internet, equipment, and educational technology.
2001	The No Child Left Behind Act mandates that states test students according to specified grades, encourages technological knowledge, and recommends that technology support learning throughout the curriculum.
2009	Race to the Top, a competition for a $4.35 billion grant from the U.S. Department of Education, was established to stimulate innovation and reform in K-12 education at the state and local levels.
2010	The Common Core State Standards for Mathematics and English Language Arts were implemented, prompting EdTech providers to develop products aligned with the new standards.
2012	Department of Education allocated $500 million to 21 educational districts to drive innovation in personalized learning.
2013	The ConnectEd initiative aimed to improve broadband access and enhance teachers' digital tool proficiency.
2014	The E-rate program was updated to support the development of high-speed Wi-Fi infrastructure in schools over the next five years.
2016	The ConnectAll initiative aimed to connect all Americans to broadband internet by the year 2020.

Technology is a significant part of the lives of the majority of Americans. In many educational districts, there is a one-to-one device initiative or an opportunity for students to bring their own personal mobile devices. Even in areas with limited resources, efforts are made to efficiently utilize available devices. Teachers use online resources to prepare lessons, enhance their professional development, and communicate with students and parents (Omidyar, 2019). Currently, students can access the internet and learning opportunities from home

through the widespread use of smartphones. Learning is no longer confined to the classroom, as students continue to engage in educational activities on their personal devices even after school hours. Several states have introduced virtual state-run schools. Additionally, many schools partner with virtual institutions and support students in pursuing online learning in specific areas of interest. Students may also register for online courses to prepare for university.

In 2018, 44.7 million students and 2.6 million teachers in over 81,000 schools had internet access with a minimum speed of 100 kbps per student. The State of the States report for the year 2018 indicated that in the 2018–2019 academic year, 99% of educational districts provided internet connectivity. Flexible bandwidth, particularly through initiatives like the E-Rate program, accelerated the deployment of broadband internet access in schools.

Government initiatives such as Race to the Top (RTT) and Investing in Innovation (i3) have led to the widespread adoption of Educational Technology (EdTech), with support from various research partnerships, collaborative networks, and advocacy groups like Future Ready Schools. Leadership from state, district, and other influential figures is crucial in building the capacity of the education system to truly transform and drive the growth of EdTech. (Omidyar, 2019)

4.1.2 Industry Level

At industry level, the analyzed content are Entrepreneurial sector, Large Corporate sector, Risk Capital sector, Educational sector (University), and Government sector.

4.1.2.1 Entrepreneurial Sector

The EdTech startup ecosystem in the United States has grown significantly in recent years. Many entrepreneurs focus on innovation in the education sector in Silicon Valley, New York, and Boston, which are prominent hubs for education startups. Numerous clusters have emerged to support the EdTech ecosystem (Navitas, 2018).

In the Bay Area of San Francisco, the heart of Silicon Valley, several noteworthy EdTech startups have emerged in the past few years, including Coursera, Udemy, and Edmodo. There are numerous examples of vibrant clusters supporting

EdTech startups, with events like EdSurge Fusion being a standout initiative. EdSurge Fusion brings together entrepreneurs, educators, and investors to share ideas and showcase innovative products. It also includes incubators and accelerators like Imagine K12 and events such as ASU+GSV Summit.

New York's EdTech startup ecosystem has also experienced significant growth, with companies like Knewton, 2U, and Codecademy leading the market. Emphasis is placed on collaboration and community building, with the NY EdTech Meetup being one of the most prominent initiatives in the city. It hosts regular activities and opportunities for networking among entrepreneurs, universities, and reputable institutions in the area, as well as media and advertising industries that help EdTech startups develop effective marketing strategies and communication.

Boston is another key center for EdTech startups, with companies such as edX, Panorama Education, and Ellevation Education leading the market. The city has a long history of innovation and entrepreneurship, hosting several prestigious universities, including Harvard and MIT, which play a crucial role in driving EdTech growth. Boston is home to organizations like LearnLaunch Accelerator and the annual LearnLaunch conference, as well as industry support organizations like the Massachusetts Technology Leadership Council, fostering innovation across various industries.

In terms of communication strategies, each region has developed its approaches to support the growth of EdTech startups. For example, the Bay Area emphasizes creating a strong community of EdTech entrepreneurs through events and conferences, providing access to consulting and funding through incubators and accelerators. In contrast, New York leverages its strengths in media and advertising to assist EdTech startups in developing effective marketing strategies and communications. Boston attracts deep and academically expert talent to support innovation and research in this sector.

Overall, the EdTech startup ecosystem in the United States is a vibrant and rapidly expanding market, attracting entrepreneurs and investors from around the world. While each region has its strengths and unique challenges, they share a common spirit of innovation and collaborative work that drives the development of exciting new products and services. With continuous investment in communication

and innovation through initiatives such as incubators and accelerators, EdTech stakeholders can contribute to ongoing growth, creating new opportunities for learners and educators.

4.1.2.2 Large Corporate

Large corporates play a crucial role in supporting the EdTech startup ecosystem by investing in startups, acquiring companies, providing resources, and forming partnerships. The following are some ways in which companies in the United States support the EdTech startup ecosystem:

Investment: Companies in the United States invest in EdTech startups through venture capital firms or direct investments. These investments provide startups with the necessary capital to develop products and expand operations.

Acquisitions: Large educational companies often acquire EdTech startups to broaden their offerings and maintain competitiveness. Acquiring these businesses allows startups to have an exit strategy and access resources essential for ongoing growth and development.

Resources: U.S. companies offer various resources, such as consulting services, networking opportunities, and access to industry expertise. These resources assist startups in navigating the complexities of the EdTech industry and accelerate their growth.

Collaboration: Companies collaborate with EdTech startups to develop innovative products and services. These collaborations enable startups to access resources and expertise while helping organizations remain competitive by integrating the latest technologies into their offerings.

4.1.2.3 Government

1) Funding:

The government allocates funds to support educational technology through various programs, such as the Enhancing Education Through Technology (EETT) initiative. This program provides funds to schools for purchasing technology equipment and software. Additionally, the government allocates funds for research and development in EdTech through programs like the Small Business Innovation Research (SBIR) project.

2) Policies:

The government has policies supporting the integration of technology in education. For instance, laws like No Child Left Behind allocate funds for educational technology, and the Every Student Succeeds Act (ESSA) has provisions for utilizing technology to enhance student learning.

3) Projects and Initiatives:

The government introduces projects and initiatives to support the development of EdTech startups. The Department of Education's Office of Educational Technology has launched initiatives such as the EdTech Developer's Guide, providing guidance to startups on developing effective and high-quality educational technology products. The government also introduces programs like the Small Business Administration's Innovation and Investment Summit, connecting EdTech startups with investors and providing resources to support their growth.

4) Collaboration:

The government collaborates with industry organizations and stakeholders to support the EdTech startup ecosystem. For example, the Department of Education collaborates with the EdTech Industry Network to create a platform for startups to engage with policymakers and leaders in the industry. This collaboration aims to foster cooperation between startups and key stakeholders for the advancement of EdTech.

4.1.2.4 University

Universities play a crucial role in supporting the EdTech startup ecosystem in the United States by providing resources, funding, and expertise to startups. The Stanford Graduate School of Education offers numerous programs and resources to support EdTech entrepreneurs, including the Stanford University School of Education Venture Studio, which provides consultancy, funding, and networking opportunities. Other institutions, such as NYU Steinhardt Edtech Accelerator and StartEd, serve as hubs for EdTech innovation and provide access to resources and support for startups. The Harvard Graduate School of Education also offers a variety of programs and resources to support EdTech startups, and the Boston EdTech Meetup gathers entrepreneurs, students, and investors for idea-sharing and community building. Here are some ways in which universities support EdTech startups:

1) Incubator and Accelerators:

Many universities host incubators and accelerators that offer startups resources and support, including office space, consultancy, networking opportunities, and funding. For example, Stanford University has the Stanford StartX incubator, providing consultancy and resources to startups founded by students, faculty, and alumni.

2) Funding:

Universities provide funding to EdTech startups through various programs such as seed funds, joint ventures, and competitions. Opportunities for fundraising can assist startups in developing their products and services.

3) Research and Development:

Universities conduct research and development in the field of EdTech, providing startups access to the latest research and expertise. Startups can collaborate with university researchers and faculty to develop innovative solutions to educational challenges.

4) Curriculum Development:

Universities develop and offer courses and programs focusing on EdTech and entrepreneurship. These programs help students develop the necessary skills and knowledge for launching and expanding EdTech businesses.

5) Collaboration:

Universities collaborate with EdTech startups to test and validate the accuracy of their products and services in the real world. Such collaborations help startups refine their offerings and gain credibility in the market.

4.1.2.5 Risk Capital

The finance sector plays a crucial role in supporting the EdTech startup ecosystem in the United States through funding and investment opportunities. Here are real-world examples of how the finance sector supports EdTech startups in the United States:

1) Venture Capital (VC) Funding:

Venture capital firms specialize in investing in high-growth potential startup businesses, including those in the EdTech sector. They provide financial resources, consultancy, and expertise to help startups scale and succeed.

Examples of venture capital firms investing in EdTech startups in the United States include Sequoia Capital, Accel, and New Enterprise Associates.

2) Angel Investors:

Angel investors are high-net-worth individuals who provide early-stage funding to startups. Generally, they invest with their own funds and often have experience in the industries they invest in. Many EdTech startups in the United States receive support from angel investors who believe in their vision and potential.

3) Corporate Investments:

Established companies in the education and technology sectors often invest in EdTech startups as part of their innovation and growth strategies. For instance, Google launched the Google for Education initiative and invested in EdTech companies like Coursera and Khan Academy.

4) Accelerator Programs:

Accelerator programs combine funding, mentorship, and resources to help startups grow rapidly, usually with a specific focus, such as EdTech. These programs provide access to networks of investors and industry experts. Examples of EdTech accelerator programs in the United States include Imagine K12 (now part of Y Combinator) and LearnLaunch Accelerator.

5) Crowdfunding:

Crowdfunding platforms enable individuals to make small donations to support projects and startups. EdTech startups often leverage crowdfunding platforms to raise funds and gain visibility. Popular crowdfunding platforms used by EdTech startups for product launches or new projects include Kickstarter and Indiegogo.

4.1.3 Organizational Level

At the organizational level, researcher have selected EdTech Startup from the United States as case studies. The chosen case studies include three companies: Coursera, Duolingo, and Udemy. The details are as follows:

4.1.3.1 Coursera

Figure 4.1 Coursera

1) Company Profile

Coursera was founded in 2012 by Andrew Ng and Daphne Koller, both professors in Computer Science at Stanford University. It is a leading provider of Massive Open Online Courses (MOOCs), collaborating with approximately 300 universities and organizations to offer more than 5,800 courses in various formats, including online courses, professional certificates, and degree programs.

In 2011, Andrew Ng and Daphne Koller began teaching their courses at Stanford University online before resigning to establish Coursera in 2012. They initiated collaborations to bring content from Princeton University, Stanford University, University of Michigan, and University of Pennsylvania to the platform.

By 2013, Coursera announced revenue of $1 million from the sale of certificates to certify course completion and introduced its first fee-based courses.

In 2014, Coursera received recognition as the Webby Winner (Websites and Mobile Sites Education 2014) and People's Voice Winner (Websites and Mobile Sites Education).

In 2016, Coursera introduced fees for scoring and assessments for specialization courses, offering financial aid to those in need. The company also launched Coursera for Business, catering to organizational clients like L'Oréal, Boston Consulting Group, and Axis Bank. Additionally, a subscription model for specialization courses with a free one-week trial was introduced.

In 2017, Coursera expanded its services to governments and nonprofits, collaborating with the Institute for Veterans & Military Families in the

United States and organizations in Egypt, Mongolia, Singapore, Malaysia, Pakistan, and Kazakhstan.

In 2018, Coursera launched fully online degree programs, including six-degree courses covering undergraduate and master's degrees in various fields.

In 2021, Coursera filed for an initial public offering (IPO) on the New York Stock Exchange.

2) Products and Services

(1) Courses: Coursera courses typically take approximately 4-12 weeks to complete. They include lecture videos of 1-2 hours per week. These courses consist of quizzes, weekly assignments, and sometimes projects or exams for course completion. Additionally, there are self-paced courses where users can complete the entire course content at their own pace. The top five popular courses on Coursera are Contact Tracing, Digital Marketing, Project Management, Python Programming, and Social Psychology.

(2) Degrees: In 2017, Coursera introduced master's degree programs starting with the Master's in Innovation and Entrepreneurship (OMIE) from HEC Paris and the Master of Accounting (iMSA) from the University of Illinois. Later, they expanded to offer a Master's in Computer Science in Data Science and a Master of Business Administration (iMBA) from the University of Illinois.

(3) Professional Certificates: Leading companies such as Google, IBM, Meta, and others have introduced professional certificate courses on Coursera. These certificates allow learners to enter various industries, including Data Analytics, IT Support, Digital Marketing, UX Design, Project Management, and Data Science. Google and more than 20 partners certify these courses at the equivalent of an undergraduate degree level and also offer scholarships.

3) Business Model Canvas

(1) Customer Segments

a) Students seeking to enhance knowledge and skills in specific fields or industries.

b) Employers wanting to improve skills for their employees, accessing a diverse pool of talent.

c) Government and other organizations providing educational and training opportunities to the public or their members.

(2) Value Propositions

a) High-quality and affordable education and training from leading universities and institutions.

b) Flexibility in learning pace and schedule.

c) Opportunities for certifications and degrees to enhance employment and career development.

(3) Channels

a) User-friendly online platform for easy registration and access to various courses.

b) Mobile applications for iOS and Android devices, enabling access to course content anywhere.

(4) Customer Relationships

a) Self-service platform: designed for users to register in courses without direct assistance.

b) Community engagement: discussion boards to foster peer interaction and collaborative learning.

(5) Revenue Streams

a) Course fees from learners opting for certificates or degrees.

b) Collaborations with organizations and support.

c) Revenue-sharing agreements with educational institutions and content providers.

(6) Key Resources

a) Universities and educational institutions providing courses and content for the platform.

b) Technology companies offering tools and platforms to support online learning.

c) Companies and organizations supporting courses, providing job opportunities, and collaborating with the platform.

(7) Key Activities

a) Development and maintenance of the online platform and supporting infrastructure.

b) Partnerships with educational institutions and organizations to source and maintain course content.

c) Global marketing and promotion of the platform.

d) Customer support and technical assistance for learners.

(8) Key Partners

a) Global universities and educational institutions offering various courses and programs.

b) Corporate clients collaborating to provide relevant learning for their employees.

c) Governments and non-profit organizations: Coursera aiming to expand access to education and support social initiatives.

(9) Cost Structure

a) Technology and infrastructure expenses for maintaining and updating the online platform.

b) Employee salaries and benefits.

c) Marketing and sales promotion costs.

d) Administrative and legal expenses.

4) Coursera Innovation Communication Strategy

Coursera employs innovative communication strategies to enhance its brand, engage with learners, and establish collaborations with educational institutions and businesses. For example, the company utilizes social media platforms such as Twitter, LinkedIn, and Facebook to promote courses, share in-depth industry insights, and engage with learners globally. Coursera also hosts webinars and online events to showcase courses and highlight the success of both learners and instructors (Coursera, 2021).

Furthermore, Coursera pioneers new communication technologies and practices to elevate the learning experience. The company employs machine learning algorithms to personalize the learning experience for each student by providing tailored recommendations and feedback based on their interests,

preferences, and learning history. Coursera offers learners the option to showcase their skills and knowledge through features like certifications and degrees, aiding them in demonstrating their capabilities to potential employers.

Coursera's organizational strategy focuses on its mission to provide high-quality education globally. The company emphasizes leveraging technology to increase access to education, helping individuals and organizations achieve their learning goals. A key organizational strategy is the collaboration with leading universities, organizations, and experts in various industries to create online courses and high-quality degree programs. Coursera collaborates with over 200 institutions worldwide, including Stanford University, Yale University, and the University of Pennsylvania, offering diverse courses and degrees to ensure learners acquire relevant and valuable knowledge for their careers.

Another significant strategy for Coursera is its commitment to personalization using platform capabilities and data. The company employs learning algorithms to recommend courses and programs based on learners' interests, preferences, and learning history. Coursera also provides learners with options for receiving personalized credentials, such as certificates and degrees, allowing them to showcase their skills and knowledge to potential employers.

In addition to catering to individual learners, Coursera extends its offerings to organizations and businesses through Coursera for Business. This organizational-level platform offers carefully curated courses and features tailored to meet the specific needs of businesses, along with tools for tracking the progress and effectiveness of employees.

4.1.3.2 Duolingo

Figure 4.2 Duolingo

1) Company Profile

Duolingo was founded in 2011 by Luis von Ahn and Severin Hacker, professor and doctoral student in Computer Science at Carnegie Mellon University. It is the world's most popular Language Learning App, offering courses in over 100 languages. Additionally, Duolingo provides the Duolingo Language Test, a language proficiency test, the Duolingo ABC app for children, and the Duolingo Math app for elementary education in mathematics. The company operates on a freemium model, with over 500 million registered users, offering a premium service without ads and additional features.

The idea for Duolingo originated in late 2009 when Professor Luis von Ahn sold his second company, reCAPTCHA, to Google. He desired to work in the education sector, inspired by the high cost of English language learning in his home country, Guatemala. On the other hand, Hacker believed in the transformative power of free education and aimed to provide access to it.

The project initially received support from research funds of Luis von Ahn, including the MacArthur Fellowship and the National Science Foundation. Originally envisioned as a non-profit organization, Duolingo's early revenue came from language translation services, later replaced by the Duolingo English Test, advertising, and subscriptions.

Duolingo launched its beta version in 2011, with over 300,000 people signing up for early access. The platform was released to the public in June, attracting an additional 500,000 sign-ups. In 2012, Duolingo introduced its app on iPhone, followed by Android, and by that time, it had around 3 million users. By July, the user base grew to 5 million, securing its position as the number one free education app on Google Play Store.

In 2014, Duolingo had 34 employees and approximately 25 million registered users, with 12.5 million active users. In 2015, the registered user count reached 100 million globally, with over 18 million active users per month.

In 2017, Duolingo reported over 200 million registered users, with 25 million active users and a workforce of 95 employees. In 2018, the registered user count surpassed 300 million.

By 2019, Duolingo reported 30 million monthly active users and increased its workforce to 200 employees. New offices were opened in Seattle, New York, and Beijing.

In 2021, Duolingo filed for an Initial Public Offering (IPO) on NASDAQ.

2) Products and Services

(1) Duolingo Language App

The Duolingo language app employs a gamified approach to language learning, incorporating lessons that include translation, interactive exercises, quizzes, and stories to make learning more engaging and enjoyable. The platform utilizes specialized algorithms that adapt to the individual learning levels and styles of each user, providing personalized suggestions and recommendations to help enhance their skills.

(2) Duolingo ABC

Duolingo ABC is an app designed for young children to learn the basics of letters, sounds, pronunciation, and other fundamental concepts of early reading. It is free to use, without ads or in-app purchases. The app is available on iOS and Android devices and currently offers content in English. It was launched in 2020.

(3) Duolingo Math

Duolingo Math is a mobile app for learning elementary-level mathematics in a format similar to the original Duolingo app.

(4) Duolingo English Test (DET)

The Duolingo English Test is an online language proficiency test that assesses an individual's English language communication abilities, including reading, writing, speaking, and listening. The test is designed to evaluate proficiency on a scale of 10-160, with scores above 120 considered expert-level English proficiency. The test is computer-based and can be taken from any location with an internet connection. It adapts its difficulty level based on the test-taker's ability. One of the main advantages of the Duolingo English Test is its convenience and accessibility, allowing test-takers to complete the test anytime, anywhere, and receive results within 48 hours. Additionally, the test is cost-effective,

generally requiring lower fees compared to other English language proficiency tests such as TOEFL or IELTS. The Duolingo English Test has gained acceptance from numerous universities, colleges, and organizations as an alternative to other English proficiency tests.

3) Business Model Canvas

(1) Customer Segments

a) Individuals seeking to learn a new language

b) Employers looking to enhance skills or provide skill development for employees

c) Educational institutions wanting to offer language education to students and learners

(2) Value Propositions

a) Free access to language education and training

b) Enjoyable and interactive learning experiences

c) Personalized lessons and recommendations

d) Certification of language proficiency

(3) Channels

Mainly utilizing websites and mobile apps to reach customers

(4) Customer Relationships

a) Self-service model, allowing learners to access the platform and courses without direct customer support

b) Customer support and technical assistance provided through the website and social media channels

(5) Revenue Streams

a) Advertising displayed on the platform

b) Sale of certificates and preparatory courses

c) Premium membership subscriptions

(6) Key Resources

a) Online platform

b) Network of language experts and educational institutions

c) Team of employees

d) Artificial intelligence algorithms

(7) Key Activities

a) Development and maintenance of the online platform

b) Collaboration with language experts and educational institutions to curate and maintain course content

c) Global marketing and promotion of the platform to learners

d) Customer support and technical assistance to learners

(8) Key Partners

a) Language experts developing and maintaining course content

b) Educational institutions for course certification

c) Technology companies for platform maintenance

d) Advertisers supporting the platform

(9) Cost Structure

a) Technology and infrastructure expenses

b) Employee salaries and benefits

c) Marketing and sales promotion expenses

d) Management and legal expenses

4.1.3.3 Udemy

Figure 4.3 Udemy

1) Company Profile

Udemy is an online learning platform that offers a wide range of courses in various fields, including technology, business, arts, health and fitness,

and more. The company was founded in 2010 by Eren Bali, Oktay Caglar, and Gagan Biyani.

Udemy is unique in that it allows anyone to become an instructor and create and sell courses on its platform. This means that learners can access a vast library of courses on a wide range of topics, from experts and professionals around the world. Udemy also offers personalized recommendations to learners based on their interests and previous course enrollments. The platform offers both free and paid courses, with pricing set by the course instructor. Udemy takes a percentage of each sale made on its platform. Additionally, Udemy offers a business solution for organizations that want to upskill their workforce and provides tools and analytics to track employee progress.

Udemy's mission is to help anyone learn anything and it has become one of the world's largest online learning platforms, with over 155,000 courses and over 40 million learners worldwide. The company has raised over $300 million in funding and has offices in San Francisco, Denver, Dublin, Ankara, and Sao Paulo.

In 2010, Udemy is founded in May by Eren Bali, Oktay Caglar, and Gagan Biyani.

In 2013, Udemy raises $12 million in Series B funding to expand its course offerings and reach a wider audience.

In 2014, The company introduces the Udemy for Business platform, targeting corporate training and professional development.

In 2016, Udemy raises $60 million in a Series D funding round to further expand its global reach and improve its platform.

In 2017, Udemy surpasses 20 million students enrolled in its courses.

In 2019, The platform raises $50 million in Series E funding, bringing its total valuation to around $2 billion.

In 2020, Udemy experiences significant growth during the COVID-19 pandemic as people turn to online learning. The company raises additional funding to support its expansion.

2) Products and Services

(1) Courses: Udemy provides a vast array of courses covering diverse topics, including technology, business, arts, personal development, and more. These courses are created by instructors from around the world. Courses typically include video lectures that learners can watch at their own pace. Instructors can include quizzes and assignments to assess and reinforce learning. Udemy often includes discussion forums for each course, allowing students to interact with instructors and fellow learners.

(2) Instructor Tools: Udemy provides tools for instructors to create and publish their courses. This includes features for uploading video content, creating quizzes, and managing course materials.

(3) Udemy for Business: Udemy for Business is a subscription-based service that provides organizations with access to a vast library of courses for their employees' professional development.

3) Business Model Canvas

(1) Customer Segments:

a) Individual learners seeking to develop their skills or pursue a new interest

b) Businesses seeking to provide training and development opportunities for their employees

(2) Value Propositions:

a) Access to a vast library of courses on a wide range of topics, taught by experts and professionals around the world

b) Personalized recommendations and learning paths based on learners' interests and previous enrollments

c) Flexible pricing options for courses, with many courses being available for free or at a low cost

d) A business solution for organizations to upskill their employees

(3) Channels:

a) Online marketing and advertising to attract learners to the platform

b) Email and push notifications to promote courses and personalized recommendations to learners

c) Partnering with businesses to offer training solutions for their employees

(4) Customer Relationships:

a) Providing customer support to learners and instructors through email, chat, and community forums

b) Offering personalized recommendations and learning paths to learners

c) Providing training and support to businesses using Udemy for their employees

(5) Key Partnerships:

a) Course creators and instructors who provide the courses offered on the platform

b) Payment processors, such as PayPal and Stripe, who handle transactions

c) Content creators and publishers who partner with Udemy to create high-quality courses

(6) Key Activities:

a) Providing a platform for course creators to sell their courses

b) Attracting and retaining learners to the platform through marketing and personalized recommendations

c) Providing customer support for learners and instructors

d) Developing and maintaining the platform and its features

e) Partnering with businesses to offer training solutions for their employees

(7) Key Resources:

a) The Udemy platform and technology infrastructure

b) The team of employees who develop and maintain the platform and support the community of learners and instructors

c) The library of courses available on the platform

d) The data and analytics generated from learner behavior and course performance

(8) Revenue Streams:

a) Udemy takes a percentage of each course sale made on the platform

b) Udemy for Business offers a subscription-based model for businesses to access courses for their employees

(9) Cost Structure:

a) Employee salaries and benefits

b) Technology infrastructure and development costs

c) Marketing and advertising expenses

d) Content creation and licensing costs

e) Payment processing fees

4.2 The People's Republic of China

4.2.1 Context Level

At context level, the analyzed content are political, economic, sociocultural, and technology aspects of each country.

4.2.1.1 Political

The Chinese government is a single-party communist state with a centralized power structure. China has a complex legal system that undergoes rapid changes, potentially creating uncertainty for foreign investors. The government heavily invests in promoting entrepreneurship and innovation, establishing innovation parks and substantial investment funds. China is unique in having a strong central government that tightly controls industries, including education. The government has initiated various projects to boost EdTech and educational innovation, such as the "Internet Plus Education" and "National Education Informatization" plans. Despite significant investment in broadband infrastructure, the government's strict control

over the internet and sensors may limit freedom of expression and innovation for EdTech entrepreneurs.

4.2.1.2 Economic

China is the world's second-largest economy with a GDP exceeding 15 trillion dollars (World Bank, 2020). The country has a substantial and rapidly growing middle class, creating opportunities for businesses that cater to their needs. The government pursues policies to promote innovation and the development of high-tech industries, such as the "Made in China 2025" initiative. China has a highly skilled workforce, but labor costs are increasing. The rapid growth of the middle class has led to a demand for quality education, and it is anticipated that the education industry will have a value of over 2 trillion yuan. The Chinese government supports private sector investment in education, leading to the emergence of numerous EdTech startups. However, the Chinese market is highly competitive, and many startups face challenges such as funding shortages, low profits, and intense competition, requiring resilience for survival.

4.2.1.3 Sociocultural

China has a population of over 1.4 billion people, making it a vast consumer market for businesses. The country is rapidly developing into urban centers, with a growing middle class that increasingly prioritizes health and environmental concerns. Chinese consumers are increasingly using mobile and digital technologies to access products and services. The Chinese education system places significant emphasis on academic performance, and parents are willing to invest heavily in their children's education. This cultural aspect has created a significant market for EdTech startups providing supplementary educational services, such as tutoring and exam preparation. The younger generation is becoming more tech-savvy and comfortable with digital devices, presenting opportunities for innovative and interactive EdTech tools.

4.2.1.4 Technological

China is a leader in numerous emerging technologies, such as artificial intelligence (AI) and 5G telecommunications. The government has heavily invested in research and development, establishing numerous research centers and technology incubators. Enforcing intellectual property rights poses a challenge for international

businesses operating in China. China leads in technological innovation and has made substantial investments in AI and other emerging technologies. The development of 5G technology and the Internet of Things (IoT) has opened new opportunities for EdTech startups to create realistic and personalized learning experiences. However, concerns exist regarding the quality and reliability of EdTech products, as many startups lack the expertise and necessary resources for developing high-quality software and hardware. Additionally, privacy and security issues in the cyberspace world raise concerns as numerous EdTech startups gather substantial amounts of data related to students and their learning patterns.

The infrastructure for mobile payments in China has facilitated the rapid adoption of online learning services through mobile devices. The shift towards a cashless society, particularly through the use of the world's largest mobile payment platforms, Alipay and WeChat Pay, has significantly increased the volume of mobile payment transactions. The widespread use of mobile devices and social media further supports the expansion of products, especially when users download apps for education through WeChat. Overall, the current state of infrastructure in China is particularly conducive to driving significant growth in the Business-to-Consumer (B2C) EdTech market. However, there is an increasing concern among parents about the use of mobile devices by elementary school students. Parents closely monitor screen time and online behavior during this developmental stage. Therefore, parental awareness of the value of mobile-based EdTech is crucial and has a significant impact on their purchasing power. In contrast, high school students have more independence in using and purchasing EdTech products. Nevertheless, the integration of EdTech in schools depends on the attitudes of teachers and school administrators, some of whom still restrict the use of technology in the school environment (Omidyar, 2019).

Table 4.2 Key Development Milestones in Educational Technology in China

Year	Milestones
1978 (Post Mao Era)	Implemented economic reforms, including the restructuring of the national education system.
1993	National Education Reform: Initiated the comprehensive reform of

Year	Milestones
	the education system, including the implementation of a full 9-year compulsory education and the development of education quality nationwide.
2000	MoE School-to-School Project: Launched the MoE School-to-School project aiming to bring internet access to 90% of primary and secondary schools in China within a decade.
2001	China Educational Technology Standards: Established the Technology Enhanced Learning Standards Committee in China to develop standards for online learning systems and technology.
2004	Tech Oriented Partners in Learning Project: Microsoft introduced the Point-to-Point Protocol (PPP) on a large scale for the first time in China's K-12 education.
2004	National Teacher Network Collaboration Plan: Launched a nationwide initiative for teacher training and education network collaboration to enhance remote learning for teachers.
2005	EdTech Standards for Teachers: The Ministry of Education developed EdTech standards for primary and secondary school teachers.
2006	National Training Programs on EdTech: The Ministry of Education developed national training programs focusing on Educational Technology.
2009	Introduction of 3G in China: 3G technology was introduced in China.
2010	National ICT Master Plan for Education: Introduced the national ICT master plan for education, emphasizing the importance of ICT in education at the intermediate and long-term levels.
2012	10-Year ICT and Education Development Plan: Introduced a 10-year development plan for ICT and education, focusing on digital inclusion with the goal of providing broadband internet to all schools.

Year	Milestones
2014	Introduction of 4G in China: 4G technology was introduced in China.
2017	5-Year Education Development Plan: The 13th 5-year education development plan aimed to improve ICT infrastructure and develop policies supportive of ICT use in education.
	China's Education Reform Policy for 2030: Announced the education reform policy for China to be modernized by the year 2030.

National-level policies in China continue to emphasize investment to enhance access to technology infrastructure, with access and equality being significant current priorities for the government. In the private sector, postgraduate tutors and the entire exam preparation market have a combined value of up to $50 billion USD. The growing middle class in China places high importance on education, driven by the pressure of the university entrance exam (Gaokao).

As of now, private sector investment in the Chinese EdTech market has surpassed $4.4 billion USD, with significant developments occurring in Beijing and Shanghai. The success of EdTech businesses selling to the government sector still depends on relationships with school administrators. Overall, the market is expected to continue growing and diversifying across various industries.

The current ecosystem of China's EdTech startups presents both opportunities and challenges for stakeholders. Government investment in education and technology infrastructure creates an innovation-friendly environment, but strict regulations and censorship practices may limit freedom of expression and innovation for EdTech entrepreneurs. The growing middle class and the focus on learning outcomes make it a crucial market for EdTech startups. However, intense competition and financial challenges make survival difficult for many startups. The tech-savvy nature of the younger generation in understanding and embracing technology innovations presents opportunities for EdTech startups to develop innovative products and services. Still, concerns about data privacy, cybersecurity, and the quality of EdTech products persist.

The EdTech industry in China is experiencing exponential growth, driven by various factors. One key driver is the increasing value placed on educational success by the growing middle class, who willingly allocate a significant percentage of their income to supplementary education services. The integration of EdTech into public education in China began with national policies and has since involved large-scale initiatives to address issues of access and equality. The Gaokao and Zhongkao exams stimulate parents to spend extensively on supplementary exam preparation courses, creating a competitive enrollment environment, especially in subjects like English, where demand for high-quality content and qualified teachers outstrips supply.

However, China remains a B2C market, and EdTech entrepreneurs expanding into public schools depend heavily on the workforce to attract various schools to use EdTech directly. Efforts need to be intensified to ensure that schools' non-risk-taking personnel are willing to adopt EdTech by creating local leaders with the goal of improving understanding of the benefits of EdTech. Overall, the EdTech industry in China presents significant opportunities for innovation and growth, particularly in areas such as language learning and computational thinking. To fully realize the potential of EdTech in China, greater acceptance in state-run schools is necessary, and more effective collaboration between EdTech entrepreneurs and school authorities is essential.

4.2.2 Industry Level

At industry level, the analyzed content are Entrepreneurial sector, Large Corporate sector, Risk Capital sector, Educational sector (University), and Government sector.

4.2.2.1 Entrepreneurial Sector

The EdTech startup ecosystem in China has experienced significant growth in recent years, with strong support from the government actively promoting the development of this sector. Beijing and Shanghai have emerged as two major cities that have become crucial hubs for EdTech startups in China.

In Beijing, the Zhongguancun Science Park, often referred to as the Silicon Valley of China, stands out as a prominent example of fostering clusters that

drive EdTech startup development. This area is home to over 2,000 high-tech organizations, including a substantial number of EdTech startups. These startups receive substantial support from the Chinese government. In addition to infrastructure and financial support, this park provides a diverse range of resources and services for entrepreneurs, such as consulting projects, incubation services, and networking opportunities. Numerous EdTech startups in Beijing benefit from the ecosystem and resources supported by the Zhongguancun Science Park.

Shanghai has also become a central hub for EdTech startups in China, with many companies situated in the Zhangjiang Hi-Tech Park. This park is the location of over 3,000 high-tech organizations, including numerous EdTech startups. The park offers abundant resources and support for entrepreneurs, including funding, incubation services, and advisory programs. The public space in this area organizes various activities and networking opportunities to facilitate connections between entrepreneurs, investors, and potential partners with significant potential.

Another notable trend in China's EdTech sector is the increasing use of Artificial Intelligence (AI) in education. Many EdTech startups in China are leveraging AI technology to develop personalized learning platforms that can adapt to the individual needs of students. The use of AI in education also helps in the development of intelligent teaching systems that can provide recommendations and personalized support to students.

Overall, the EdTech startup ecosystem in China stands out due to strong government support, a robust financial environment, and a growing demand for innovative education solutions. With the assistance of various clusters such as the Zhongguancun Science Park and Zhangjiang Hi-Tech Park, along with the utilization of innovative communication channels and technologies, EdTech startups in China are well-positioned for continuous growth and success.

4.2.2.2 Government

The Chinese government has made extensive efforts to support the startup ecosystem in EdTech within the country. The government's support for the EdTech startup ecosystem in China includes:

Funding: The Chinese government provides funding to EdTech startups through various channels, including joint investment funds, government assistance

funds, and subsidies. Additionally, the government grants tax benefits to EdTech startups to promote innovation and growth.

Policies and Regulations: The Chinese government has developed policies and regulations that support the growth of the EdTech industry. For example, the government has launched initiatives such as “Internet Plus Education,” aiming to integrate technology with education and promote the development of EdTech startups.

Infrastructure: The Chinese government invests significantly in building infrastructure to support the EdTech startup ecosystem. This includes the development of incubators, accelerators, and innovation parks that help startups access resources, funding, and networking opportunities.

Educational Reform: The government of China has implemented educational reforms to support the growth of the EdTech industry. These reforms focus on promoting digital literacy, developing online learning platforms, and encouraging the use of technology in classrooms.

Collaboration: The Chinese government collaborates with EdTech startups to promote innovation and growth in the industry. For instance, the government has partnered with Tencent, one of China’s largest technology companies, to develop online education platforms.

Overall, the Chinese government’s comprehensive support, including financial aid, policy initiatives, infrastructure development, educational reforms, and collaboration efforts, has created a favorable environment for the continuous growth and success of the EdTech startup ecosystem in the country.

4.2.2.3 University

Incubator and Accelerator Programs: Several universities in China have established incubator and accelerator programs to support education-focused startups. For example, Tsinghua University has a center called X-Lab, which focuses on educational technology. Beijing Normal University operates an incubator named BNU-HKBU United International College Edtech Accelerator.

Research and Development: Universities provide support for research and development in the EdTech startup sector. For instance, Zhejiang University has established the Smart Education Research Center to conduct research and development in educational technology.

Collaboration and Partnerships: Universities often collaborate with EdTech startups to develop new products and services. East China Normal University, for example, has partnered with the EdTech startup 17zuoye to develop an AI-powered writing tool for students.

Investment: Universities and educational institutions may invest in EdTech startups. Tencent, for instance, invested in the homework assistance app Zuoyebang, founded by former teachers from Peking University.

Skill Development: Universities play a role in enhancing skills for the EdTech industry. Many universities offer courses and programs in educational technology, and some even have specialized degree programs. Additionally, universities may organize events and competitions to promote innovation and entrepreneurship in educational technology.

4.2.2.4 Risk Capital

Investment companies in China actively support the EdTech startup ecosystem by providing funding, consultation, and networking opportunities for promising startups. They seek EdTech startups that are innovative with unique business models, disruptive technologies, and strong growth potential. These investment firms often have specialized teams focused on EdTech and leverage their expertise to evaluate and support these companies. Additionally, they may offer incubation services, such as office space, management support, and access to resources to help startups develop their products and facilitate business growth. These investment firms also play a crucial role in fostering the growth and success of the EdTech startup ecosystem in China through strategic funding and support.

4.2.3 Organizational Level

At the organizational level, researcher have selected three EdTech Startup as case studies. They are Yuanfudao, Zuoyebang, and VIPKID. The details are as follows:

4.2.3.1 Yuanfudao

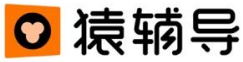

Figure 4.4 Yuanfudao

Yuanfudao, founded in 2012, is China's largest online education platform, serving primary and secondary school students. With over one million paying users, Yuanfudao offers a wide range of courses, covering subjects from English and Math Olympiads to comprehensive high school curricula. The platform provides unique online features and a large group of high-quality teachers nationwide who conduct live online teaching sessions, assisting students with real-time homework help. Yuanfudao's platform utilizes artificial intelligence and machine learning algorithms to tailor personalized learning experiences for each student, analyzing progress and learning styles to offer curriculum and content recommendations.

One key factor that sets Yuanfudao apart is its emphasis on utilizing AI and machine learning to customize the learning experience for individual students. The platform analyzes user data to track progress and learning styles, providing tailored curriculum and content recommendations. Additionally, Yuanfudao offers features such as online Q&A forums, where students can seek help from teachers and peers, and study groups that facilitate collaborative learning.

Another distinctive factor contributing to Yuanfudao's success is its popularity and rapid growth. The company has become one of the world's most valuable EdTech startups, with a valuation exceeding $15 billion in 2020. It boasts a user base of over 400 million registered users and more than 10 million daily active users, showcasing its widespread appeal and daily engagement.

1) Customer Segments

K-12 students and parents in China who are seeking online education services such as one-on-one tutoring, homework assistance, and exam preparation.

2) Value Proposition

Personalized learning experiences using artificial intelligence and machine learning algorithms. It includes real-time online tutoring sessions, on-demand homework help, access to a large educational content library, and features like online Q&A forums and study groups.

3) Channels

Online channels such as websites and mobile apps to reach customers. Additionally, offline channels include tutoring centers and partnerships with schools.

4) Customer Relationships

Provide high-quality service and support to users, including personalized recommendations for courses and content, one-on-one tutoring sessions, and online Q&A forums. It also supports collaborative work and community building among users through study groups.

5) Revenue Streams

(1) Membership fees for premium services.

(2) Commissions from transactions on the platform.

(3) Fees for one-on-one tutoring sessions.

6) Key Resources

Online platform, artificial intelligence and machine learning algorithms for learning, educational content, and a network of tutors and teachers.

7) Key Activities

(1) Developing and maintaining the platform.

(2) Creating educational content.

(3) Providing personalized learning experiences.

(4) Managing the network of tutors and teachers.

8) Key Partnerships

(1) Schools, tutoring centers.

(2) Content providers to expand its offerings and reach a broader customer base.

9) Cost Structure

(1) Development and maintenance of the platform.

(2) Licensing and creating educational content.

(3) Hiring and training tutors and teachers.

(4) Marketing and advertising costs.

4.2.3.2 Zueyebang

Figure 4.5 Zuoyebang

Zuoyebang is a Chinese online education platform that provides assistance to K-12 students with homework, live tutoring, and other educational services. The company was founded in 2014 by Hou Jianbin, Liu Heng, and Yang Bo.

Zuoyebang offers a plethora of features to aid students in their education, including an AI-driven homework assistance system, live one-on-one tutoring, an educational content library, and a social platform that allows students to connect with peers in groups. The platform also provides study sessions and tools for parents to track their children's progress and communicate with tutors and teachers.

The use of technology by Zuoyebang to enhance the learning experience and its focus on providing high-quality educational services to students in China have contributed to its rapid growth. As of 2022, the company has registered over 800 million users and has a valuation exceeding 10 billion dollars.

1) Key Partners

Educators and Content Providers: Individuals and organizations creating educational content for the platform.

Investors: Those providing essential funding to expand platform accessibility and capabilities.

Technology Partners: Partnerships with technology providers to supply necessary infrastructure and support platform operations.

2) Key Activities

Development and Maintenance of Online Platform: Providing assistance with homework, one-on-one tutoring, and quality educational content for K-12 students in China.

Creation and Management of High-Quality Educational Content: Ensuring students have access to the best possible learning resources.

Collaboration with Educational Institutions and Teachers: Working with schools and teachers to enhance the quality and relevance of content and services offered on the platform.

Utilization of AI and Data Analysis: Using AI and data analysis to customize the learning experience and improve student outcomes.

Customer Support and Assistance: Providing support and assistance to customers, including students, parents, and teachers using the platform.

3) Key Resources:

Proprietary Technology: Driving the platform, including AI and data analysis tools.

Large Team of Instructors, Developers, and Support Staff: Working to create and maintain the platform.

Collaboration with Educational Institutions and Content Providers: Ensuring the platform has access to high-quality resources.

Access to Funding: Accessing funds and investments to support platform growth and expansion.

4) Value Propositions:

Access to High-Quality Education: Providing K-12 students in China access to high-quality educational content and personalized learning experiences.

Assistance in Homework, One-on-One Tutoring, and Community Access: Offering students support in homework, one-on-one tutoring, and community connections to enhance their learning.

Tools for Parents: Allowing parents to track their children’s progress and communicate with tutors and teachers.

Use of Technology for Enhanced Learning: Employing technology to improve the learning experience and focus on delivering high-quality educational services to students.

5) Customer Segments:

K-12 Students in China: Students seeking high-quality educational resources and personalized learning experiences.

Parents Looking to Support their Children's Education: Parents seeking ways to support their children's education and ensure they achieve the best results.

Educational Institutions and Teachers: Institutions and teachers looking to improve student learning outcomes and elevate the quality of their teaching.

6) Channels:

Zuoyebang Online Platform: Providing access to homework assistance, tutoring, and educational content.

Social Media and Digital Marketing Channels: Promoting the platform and attracting new customers.

Collaboration with Educational Institutions and Content Providers: Expanding the scope and quality of resources available on the platform.

7) Customer Relationships:

Blend of Automated and Human Interaction: Utilizing a combination of automated responses and human interaction to tailor the learning experience and foster strong relationships with students, parents, and teachers.

Access to Personalized Tutoring and Individualized Recommendations: Offering students personalized tutoring and individualized recommendations to aid skill development and academic achievement.

Customer Support Team Ready to Assist: A customer support team ready to assist users with any problems or questions they may have.

8) Revenue Streams:

Membership Fees and Platform Transaction Commissions: Generating revenue through membership fees for premium services and transaction commissions on the platform.

Premium Access Purchases: Students and parents can purchase premium access to features and services such as one-on-one tutoring and personalized homework assistance.

Commission from Educational Product Sales: Earning commissions from the sale of educational products and services, such as textbooks and exam preparation materials, through the platform.

4.2.3.3 VIPKID

Figure 4.6 VIPKID

Established in the 2013 and officially launched in 2014 by Cindy Mi, the VIPKid platform connects students in China with teachers in the United States and Canada. The online classroom portal enables students to receive 25-minute English lessons from proficient English-speaking teachers. Students and teachers communicate through the platform's video chat feature.

In 2017, VIPKid introduced a new service called Lingo Bus to teach intermediate Chinese to students aged 5 to 12.

In 2017, VIPKid reported raising a Series D+ funding of $200 million, and in April 2018, they raised an additional $500 million in Series D+ funding. The combined amount valued VIPKid at $3 billion. In November 2018, the company reported having 60,000 contracted teachers instructing 500,000 students.

In May 2020, VIPKid announced a shift in its payment structure, leading to a more efficient fee reduction for most teachers.

In 2021, VIPKid ceased operations in China related to foreign teachers. Customers within China would use Chinese teachers within the country and/or teachers residing in China with teaching licenses.

Business Model Canvas for VIPKid:

1) Customer Segments:

Chinese children aged 4-15 who want to learn English.

Parents who seek high-quality English education for their children.

2) Value Proposition:

One-on-one teaching experience with native English-speaking teachers from North America.

Individualized learning plans tailored to the needs of each student.

Engaging curriculum with games, songs, and interactive activities.

Flexible scheduling and lesson planning.

3) Channels:

VIPKid's online platform, including video conferencing and interactive learning tools.

Marketing through social media, search engines, and word of mouth.

Collaboration with schools and educational companies in China.

4) Customer Relationships:

Personalized communication with parents and students through the online platform.

Feedback and progress reports provided to parents after each lesson.

Continuous support and guidance from VIPKid's customer service team.

5) Revenue Streams:

Fees charged to students and parents for each lesson.

Membership fees for accessing learning materials and additional resources.

Commission fees collected from teachers for each lesson taught.

6) Key Resources:

Technology platform, including video conferencing and interactive learning tools.

Curriculum development team and education experts.

Network of certified teachers in North America who undergo training and certification.

Customer service team to assist students and parents.

7) Key Activities:

Development and improvement of curriculum to align with Chinese students' needs.

Recruitment, training, and certification of teachers in North America.

Marketing and promotion of the platform to potential customers.

Continuous support and feedback to students and parents.

8) Key Partners:

Schools and educational companies in China partnering with VIPKid to offer English education.

Payment processing companies to manage transactions and fees.

Cloud hosting and IT service providers to ensure the smooth operation of the platform.

9) Cost Structure:

Salaries and benefits for employees, including curriculum developers, customer service representatives, and IT staff.

Marketing and advertising expenses.

Infrastructure costs for technology and maintenance.

Compensation for teachers for each lesson taught.

4.3 Republic of India

4.3.1 Context Level

At the context level, researchers have analyzed issues related to politics, economics, socio-cultural aspects, and technology in each country.

4.3.1.1 Political

India is a stable democratic country, but political corruption remains a significant challenge. There is a complex regulatory framework and a lack of consistent policies in certain regions. The government is working towards improving the ease of doing business by reducing bureaucratic obstacles and providing incentives for startups. Initiatives such as Digital India, Startup India, and Skill India have been introduced to support the startup ecosystem, particularly in EdTech, by increasing education spending.

4.3.1.2 Economic

India boasts the sixth-largest economy globally, with a GDP of $3.1 trillion in 2020. The country has a rapidly growing and young workforce, coupled with a large consumer market. Income inequality is high, and poverty remains a challenge. The economic growth of India has been impacted by the COVID-19 pandemic, leading to a slowdown.

4.3.1.3 Socio-cultural

India has a diverse population of over 1.3 billion people, marked by regional and linguistic variations. The country has a sizable and growing middle class with increasing incomes and changing consumer preferences. Education holds significant value in Indian society, and there is a high demand for education and skill development.

4.3.1.4 Technological

India has a large and rapidly growing internet user base, with a surge in smartphone users and digital literacy. The country has a robust IT industry and a skilled software development workforce. This presents opportunities for EdTech startups to leverage these resources. However, challenges exist in terms of internet connectivity quality in rural areas, posing a hurdle for EdTech startups to reach these regions.

4.3.2 Industry Level

At the industry level, researchers have analyzed issues from stakeholders in the environmental system, which consists of five groups: startup entrepreneurs, large businesses, the government, the education sector, and financial and investment sectors.

4.3.2.3 Government:

1) Funding: The Indian government provides funding for EdTech startups through various initiatives such as Digital India and Atal Innovation Mission.

2) Policies and Regulations: The Indian government establishes policies and regulations to support the growth of the EdTech industry.

3) Research and Development: The Indian government funds research and development in EdTech, providing startups access to research and the latest expertise.

4) Collaboration: The Indian government collaborates with EdTech startups to develop and implement new technologies in education.

5) Supporting Infrastructure: The Indian government creates supporting infrastructure such as incubators, accelerators, and innovation centers to provide resources and support for startup growth and development.

6) Ministry of Education: The Ministry of Education is responsible for developing and implementing policies and innovative ideas in education in India. It allocates funds and resources to support EdTech startups that focus on improving educational outcomes and promoting innovation in the education sector.

7) Department of Science and Technology: The Department of Science and Technology promotes scientific and technological development in India. This department provides funding and resources to support EdTech startups focusing on technology development and innovative solutions for the education sector.

8) National Skill Development Corporation: The National Skill Development Corporation (NSDC) is a public-private partnership aiming to promote skill development in India. NSDC provides funding and resources to support EdTech startups focusing on skill development and vocational training.

9) Atal Innovation Mission: Atal Innovation Mission (AIM) is a government-led initiative aimed at fostering innovation and entrepreneurship in India. AIM provides funding and resources to support EdTech startups focusing on developing innovative technology and solutions for the education sector.

10) Startup India: Startup India is a government initiative aimed at promoting the growth of startups in India. This initiative provides various resources and support, including funding, consultancy, and regulatory guidance, to a diverse range of EdTech startups.

11) Digital India: Digital India is a flagship program of the Indian government aimed at promoting the use of technology across various sectors, including education. This program supports EdTech startups that focus on developing innovative digital solutions for education.

In conclusion, the Indian government supports various initiatives and programs to foster the EdTech startup ecosystem. This support is crucial for EdTech startups in India, given the complexity of government policies and regulations. As the largest EdTech market globally, India is experiencing rapid growth, driven by a large population, a growing middle class, and increasing digital literacy. The EdTech industry in India is expected to reach $10 billion by 2028, with a CAGR of 39%, making it a highly profitable sector for startup entrepreneurs. Bengaluru, also known as the Silicon Valley of India, has been a central hub for technology and startup businesses for many years. It is the headquarters of major EdTech companies such as Byju's, Vedantu, Simplilearn, and Unacademy, contributing to the city's reputation as a thriving center for innovation and entrepreneurship. New Delhi, the capital city, is also witnessing significant growth in EdTech startups. Cuemath, an EdTech startup in Delhi, has established a nationwide network of math learning centers and raised $40 million in funding in 2021. Other prominent EdTech startups in Delhi include Testbook, UpGrad, and Toppr. The Indian government has initiated several measures to promote the EdTech startup ecosystem in the country. In 2018, the government launched the 'Study in India' program to attract international students to Indian universities, leading to an increased demand for online learning platforms. The government has also started various projects to promote digital literacy, such as the Digital India campaign, which aims to provide digital infrastructure to all citizens in

the country. In terms of fostering clusters, accelerators that accelerate the growth of EdTech startups are prevalent in Bengaluru and New Delhi. The Indian School of Business (ISB) in Hyderabad offers mentorship programs, networking opportunities, and financial support for EdTech startups. The Indian government has introduced Atal Innovation Mission (AIM) to promote innovation and entrepreneurship in the country. AIM has established Atal Tinkering Labs across the country to encourage students to develop new and creative ideas. The government has launched numerous projects to support startups, including those in the EdTech sector.

4.3.3 Organizational Level

At organizational level, researchers have selected three Edtech startup as case studies, they are BYJU'S, Unacademy, and Vedantu

4.3.3.1 BYJU'S

Figure 4.7 BYJU'S

Byju's was founded in the year 2011 by Byju Raveendran and Divya Gokulnath. Byju, a professional engineer, started teaching students in mathematics since the year 2549. In its early stages, the company focused on offering online learning programs through video for the K-12 group and competitive exam preparation.

In 2012, Byju's entered the rankings of Deloitte Technology Fast 50 India and Deloitte Technology Fast 500 Asia Pacific, marking its recognition in the industry. In August 2558, the company introduced "Byju's: The Learning App."

By 2017, they launched a mathematics app for children and Byju's Parent Connect app.

By 2018, the app had 15 million users, including 900,000 paid subscribers, making Byju's India's first edtech unicorn.

In January 2022, Byju's joined forces with Simplilearn, Unacademy, upGrad, PrepInsta Prime, and Vedantu to become a founding member of the India EdTech Consortium of IAMAI. In March 2565, the company signed an agreement with Qatar Investment Authority to establish a new edtech company and R&D center in Doha.

In August 2022, Bloomberg News reported that the Ministry of Corporate Affairs had sent a letter to Byju's, requesting an explanation for not filing audited financial statements for the fiscal year ending March 2021. Byju's missed the deadline by more than 17 months, citing challenges in reconciling accounts for that year. Despite the delay, Deloitte gave the company a clean audit.

In November 2022, several employees of Byju's protested against the company's allegedly unfair practices, with reports indicating that Byju's had laid off over 5,000 employees.

1) Products and Services:

Byju's is an educational app operating on a freemium model, limiting free content access to 15 days after registration. Launched in August 2015, the app offers educational content for students from grade 4 to 12. In 2019, advanced learning programs started for grades 1 to 3, along with exam preparation for various Indian exams and international exams like GRE and GMAT.

The learning content is presented through 12-20 minute digital animation videos explaining academic topics and concepts. Byju's reported a user base of 40 million, with 3 million paid subscribers and an annual user retention rate of approximately 85% as of October 2018. By October 2018, the app expanded to the United Kingdom, the United States, and other English-speaking countries.

In 2019, the company announced plans to launch the app in regional Indian languages. Additionally, Byju's introduced a global app version for English-speaking students in other countries and launched a new program for early learners.

Byju's Future School, led by WhiteHat Jr. founder Karan Bajaj, was introduced, aiming to transition from interactive learning to active learning through a platform combining coding with subjects like mathematics, science,

English, music, and visual arts. Byju's Future School was launched in the United States, the United Kingdom, Australia, Brazil, Indonesia, and Mexico in May.

Byju's has been expanding its reach beyond the original learning app by investing in and acquiring various companies. The acquisitions include TutorVista in July 2017, Osmo in January 2019, WhiteHat Jr. in August 2020, LabInApp in September 2020, Scholr in February 2021, Aakash Educational Services in April 2021, Epic! in July 2021, Great Learning in July 2021, and GeoGebra in December 2021.

As of September 2023, Byju's has invested at least $2.8 billion in more than 12 acquisitions, aiming to diversify its services beyond the original learning app. The company has ventured into areas such as MOOCs, learning centers, virtual reality, artificial intelligence, and educational games.

2) Business Model Canvas for BYJU's:

Customer Segments: BYJU's primary customer segments include K-12 students, parents, as well as teachers and schools that may use BYJU's platform as an educational resource.

Value Proposition: BYJU's offers personalized learning experiences, including video lessons, interactive quizzes, and personalized recommendations. The platform is designed to help students learn at their own pace and improve learning outcomes.

Channels: BYJU's employs a mix of online and offline channels to reach customers, including digital advertising, social media, word of mouth, and partnerships with schools and educational organizations.

Customer Relationships: BYJU's focuses on building long-term relationships with customers by providing high-quality educational content, personalized support, and continuous engagement through social media and other channels.

Revenue Streams: BYJU's generates revenue through a subscription model, where customers pay monthly or annual fees to access the platform's content and resources.

Key Resources: BYJU's key resources include an expert team in education, a proprietary technology platform, and collaborations with schools and educational organizations.

Key Activities: BYJU's main activities involve content development and production, marketing and platform promotion, and expanding access through partnerships and collaborations.

Key Partnerships: BYJU's partnerships include collaborations with schools and educational organizations, as well as strategic partnerships with technology companies and other businesses.

Cost Structure: BYJU's cost structure includes expenses related to content development, technology infrastructure, marketing and advertising, and employee salaries and operations.

4.3.3.2 Unacademy

Figure 4.8 Unacademy

Unacademy was founded by Gaurav Munjal, Hemesh Singh, and Roman Saini in the year 2015. It is an Indian educational technology company that operates an online learning platform. The company is headquartered in Bengaluru, Karnataka, India, and focuses on preparing students for various competitive exams such as JEE, NEET, UPSC, CA, GATE, UPSC NDA, CUET, and various board exams. Additionally, Unacademy offers content related to basic courses (K-12) and skill development (programming, photography, entrepreneurship, etc.).

1) Products and Services:

Unacademy started as a YouTube channel created by Gaurav Munjal in 2015 while he was still an engineering student. Initially, Munjal uploaded short tutorial videos on computer graphics to help his friends prepare for exams. In December 2015, Munjal invited Hemesh Singh and Roman Saini to launch the

Unacademy app, providing free interactive content. By 2020, Unacademy had over 1 million learners, more than 5,000 registered educators, and offered over 40,000 live classes. Unacademy became a founding member of the India EdTech Consortium, alongside other educational technology companies like Simplilearn, PrepInsta Prime, UpGrad, Byjus, and Vedantu.

In 2019, Unacademy introduced Unacademy Plus, a subscription-based model that allowed students across the country to access live courses in English and 14 Indian languages. In 2020, Unacademy launched Graphy, enabling educators to start their online schools in under 60 seconds. The company also established offline learning centers, starting with one in Gwalior, Madhya Pradesh, followed by others in Delhi, Mumbai, Bengaluru, and more.

In 2018, Unacademy acquired WiFiStudy, an online exam preparation platform, for $10 million. In the same year, Unacademy acquired Kreatryx for GATE and ESE preparation, CodeChef for programming education, and PrepLadder for medical entrance exam preparation, investing a total of $50 million. Unacademy also introduced Mastree and Coursavy for Union Public Service Commission (UPSC) exam preparation, collectively valued at 1,000 crores.

In 2020, Unacademy achieved unicorn status with a $150 million investment from SoftBank Vision Fund at a valuation of $1.5 billion. Unacademy became an official sponsor of the Indian Premier League (IPL) for 2020–22. In November 2023, Unacademy raised $2 billion in Series G funding from Tiger Global Management and Dragoneer Investment Group.

During the COVID-19 pandemic in 2020, Unacademy opened its platform for schools and colleges to conduct live classes. The company also launched Legends on Unacademy, featuring renowned personalities from various fields teaching their expertise live.

In 2021, Unacademy introduced “Educate India,” a initiative supported by Feeding India, offering free one-year memberships worth ₹19 crore to 10,000 children.

Unacademy signed MoUs with various state governments and the National Space Defense Center to support talented students in preparing for exams like K-12, IIT-JEE, NEET UG, and defense exams.

Unacademy launched the Shikshodaya project in 2021 to provide education to over 500,000 girls across India.

2) Business Model Canvas:

Key Partners: Students creating content, publishers and authors providing learning materials, technology providers facilitating online course delivery. Partnerships with brands and institutions for promotional activities.

Key Activities: Digital platform creation, digital marketing, content creation, live class and test offerings, personalized learning experiences. Participation in marketing campaigns and sales promotion activities.

Key Resources: Technology platform, student network, platform management team. Investment in research and development to enhance the learning experience.

Value Propositions: Quality education accessible to everyone in India, diverse course offerings in various Indian languages, including live classes, test series, and personalized learning. Creative features like ‘Ask a doubt’ and ‘Crash Courses’ for quick problem-solving.

Customer Segments: Students preparing for competitive exams such as UPSC, SSC, banking exams, and railway exams. The platform also supports students from underprivileged backgrounds through various initiatives.

Customer Relationships: Primarily digital interactions through the website and mobile app. Customer support team dedicated to addressing student queries and concerns.

Channels: Website and mobile app for course access. Participation in various marketing activities like advertising campaigns and sales promotion to reach the target audience.

Revenue Streams: Membership fees, test series fees, and advertising revenue. Various subscription plans offering monthly and yearly access to courses and services.

Cost Structure: Technology and infrastructure costs, employee salaries, marketing and advertising expenses, content creation costs. Significant investment in research and development.

4.3.3.3 Vedantu

Figure 4.9 Vedantu

Vedantu is an online teaching platform in India that was launched in 2014 in Bengaluru, India. It caters to students from grades 4 to 12 primarily. The name Vedantu is derived from the Sanskrit words Veda (knowledge) and Tantu (network). The organization is founded by IIT alumni Vamsi Krishna (Co-founder and CEO), Pulkit Jain (Co-founder and Head of Products), Saurabh Saxena (Co-founder), and Anand Prakash (Co-founder and Head of Academics). Previously, the team founded Lakshya, which was later acquired by MT Educare (a subsidiary of Zee Learn).

In general, Vedantu provides services to students from grades 4 to 12 of the Indian Certificate of Secondary Education (ICSE) and Central Board of Secondary Education. The company's main focus is on live online teaching in STEM, Hindi, English, Sanskrit, German, French, Environmental Science, and Social Science. It uses the Whiteboard Audio Video Environment (WAVE) method for live teacher-student sessions on a 1-1 basis. Vedantu offers courses for exam preparation, such as the Indian Institute of Technology Joint Entrance Examination (JEE), National Talent Search Examination (NTSE), National Eligibility cum Entrance Test (NEET), and Problem Solving Assessment (PSA). Other courses include coding, mathematics, reading, and public speaking.

In 2022, Vedantu joined forces with Byju's, Simplilearn, Unacademy, PrepInsta Prime, and upGrad, becoming one of the founding members of the India EdTech Consortium by IAMAI. They also introduced W.A.V.E 2.0, a responsive platform aimed at supporting artificial intelligence.

One of Vedantu's notable features is the Whiteboard Audio Video Environment (WAVE) technology, facilitating smooth communication between students and teachers during live classes. The company offers a variety of courses and

programs, including personalized one-on-one and group classes, exam preparation, and career counseling.

Vedantu has gained recognition for its innovative educational approach and received funding from reputable investors such as Tiger Global and Accel Partners. The company boasts more than 1 million students and has conducted over 12 million hours of live classes.

Vedantu's business model, using the Business Model Canvas:

1) Customer Segments:

K-12 students seeking live online tutoring and personalized learning experiences.

Parents and schools looking for convenient and affordable learning solutions.

2) Value Proposition:

Providing an interactive and personalized learning experience through live online classes, testing, and assigned tasks.

Offering flexibility, competitive pricing, and convenience, allowing students to schedule classes and choose from a diverse range of courses and programs.

3) Channels:

Primary digital channels include the website and mobile app for customer access.

Utilizing social media, search engine marketing, and business partnerships to attract new customers.

4) Customer Relationships:

Building relationships through personalized learning experiences and excellent customer support.

Using chatbots, email support, and telephone communication to address customer questions and concerns.

5) Revenue Streams:

Collecting fees from students for live classes, courses, and exam preparation.

Offering subscription plans for regular classes and personalized learning programs.

6) Key Resources:

Online platform, WAVE technology, qualified teachers, and customer support team.

Collaborating with schools, colleges, and education companies to expand access.

7) Key Activities:

Conducting live online classes, developing personalized learning plans, creating and delivering educational content.

Recruiting and training teachers, managing customer relationships, and promoting new courses and programs.

8) Key Partnerships:

Collaborating with schools, colleges, and education companies to expand access and offer new courses.

Partnering with payment gateways and marketing agencies within the group to boost sales.

9) Cost Structure:

Investing in technology development, teacher salaries, marketing and advertising expenses, customer support, and management costs.

Leveraging online platforms to reduce overhead costs and provide cost-effective learning solutions.

CHAPTER 5

RESEARCH FINDINGS FROM IN-DEPTH INTERVIEWS

The study “Innovation Communication of EdTech Startup Entrepreneur” was conducted by qualitative research through in-depth interviews with relevant stakeholders from the EdTech Startup Ecosystem in Thailand. With the following details;

5.1 Innovation Communication of EdTech Startup Entrepreneur

5.2 Innovation Communication of Government Agency

5.3 Innovation Communication of the Media

5.1 Innovation Communication of EdTech Startup Entrepreneur

For the study of innovation communication among EdTech startup entrepreneurs in Thailand, the researcher conducted in-depth interviews with three individuals. These individuals are Takarn Ananthothai from Globish, Nakorn Phuekphiphatmet from Conicle, and Chula Pittayapinan from OpenDurian. The key points discussed are as follows:

5.1.1 Entrepreneur’s Perspective on EdTech Startup in Thailand

5.1.2 Communication Roles of EdTech Startup Entrepreneur

5.1.3 Defining Vision and Mission of EdTech Startup Entrepreneur

5.1.4 Innovation Communication with Customers

5.1.5 Innovation Communication with Employees

5.1.6 Innovation Communication with Co-Founder

5.1.7 Innovation Communication with Investors

5.1.8 Innovation Communication with Partners

5.1.9 Innovation Communication with Stakeholders

5.1.10 Innovation Communication with International Market

5.1.1 Entrepreneur's Perspective on EdTech Startup in Thailand

From the perspective of entrepreneurs in the EdTech startup sector in Thailand, it is evident that EdTech is crucial in terms of accelerating the transfer of knowledge, skills, and various in-depth information. Traditionally, these processes took much longer, but with the capabilities of technology, the dissemination has become significantly faster. Additionally, EdTech is seen as creating opportunities for learning beyond the classroom, fostering a desire for education, and promoting lifelong learning behaviors.

Furthermore, there is a viewpoint that EdTech facilitates learning processes outside the traditional educational settings and contributes to the development of a lifelong learning culture. Private sector involvement is noted to play a role in shaping the learning experiences of employees. Another perspective highlights the enhancement of academic performance and increased accessibility, positioning EdTech as a catalyst for the creation of new innovations in Thai education. The details are outlined as follows:

Table 5.1 Perspective on EdTech Startup in Thailand

Speed of Knowledge Transfer, Insight Transfer, and Skill Transfer	Enhance and Transform Learning Process to Lifelong Learning and Corporate Learning	Enable Higher Academic Outcomes and Wider Reach with New Innovation

"Over the past 10 years, I believe it's been about knowledge transfer. It used to be a conventional method, like having libraries. You gain access to people, and then you provide them with knowledge. However, I think it's no longer just knowledge transfer. It's because a lot of knowledge is freely available now. It's evolving more into insight transfer or skill transfer. The crucial point is, when new knowledge is created, it often happens in the private sector and various industries, which heavily rely on technology. Nowadays, it's starting to become part of general courses, although it takes a considerable amount of time. EdTech can make this happen overnight, while still preserving copyrights and the originality or brands of

knowledge providers. It provides speed in skill transfer and insight transfer, taking seconds compared to the traditional process that used to take years.” Takarn Ananthothai from Globish

“EdTech is about incorporating technology to enhance or transform the learning process, not just within classrooms. It aims to inspire a desire for learning, not restricted to universities or schools but from the perspective of a lifelong learning lifestyle. Education should not only rely on structures and details that have been in place for too long. Some people may see it as a matter for the government or wonder what entrepreneurs can contribute. However, when EdTech emerges, the context becomes limitless. It’s not just about a four-year university degree and the traditional approach to learning; it evolves into lifelong learning. Private organizations see EdTech as a role they need to adopt. They must equip their employees with the skills that match the changing technology and the evolving landscape. This shift in the situation creates opportunities right here.” Nakorn Phuekphiphatmet from Conicle

“EdTech is about making education more academically effective and increasing access to a larger audience. Education is the most crucial element in our society, evident from the largest budget allocation to the Ministry of Education. However, the education sector tends to move slowly. Today, when we look at instructional media, there is not much innovation, and even assessment systems still rely on traditional technologies. We allocate a significant budget to something that is key to societal development, yet it has been overlooked and neglected for a long time.” Chula Pittayapinan from OpenDurian

5.1.2 Communication Roles of EdTech Startup Entrepreneur

From studying communication roles of EdTech startup entrepreneurs in Thailand, it is found that there are changes corresponding to the organization’s growth. Each organization has unique approaches and characteristics, but they can be broadly categorized into three phases:

1) Startup Phase (Product-Market Fit): This is the initial phase where entrepreneurs explore and experiment to find a suitable direction between innovative products or services and their target audience. Based on the case studies, this phase takes approximately 1-2 years, with a team consisting of co-founders and no more

than 10 employees. The investment mainly comes from personal funds (bootstrap) and borrowing from close contacts such as friends and family. Communication is mainly interpersonal and group communication that reaches everyone.

2) Growth Phase (Business Model Fit): In this phase, entrepreneurs have discovered innovative products and services suitable for their customers. It involves creating various systems related to people, products, customers, and finances. This includes hiring employees, building organizational culture, organizational structure, work processes, customer communication, and communication with different stakeholder groups. The main goal is to establish a structure to support rapid growth. This phase takes approximately 1-3 years, and the size of the organization is around 10-40 people. During this phase, there is interaction with investors, and there is a clear internal and external communication structure.

3) Expansion Phase (Scale): This phase involves replicating the successful business model to achieve rapid growth. It includes increasing the number of products and services, expanding the target customer base, and entering new markets. Additionally, it explores new revenue streams. From the case studies, this phase takes approximately 1-3 years, and the organization's size is around 40-140 people. Large investors provide support during this phase, and communication becomes more complex, requiring the creation of a clear organizational culture.

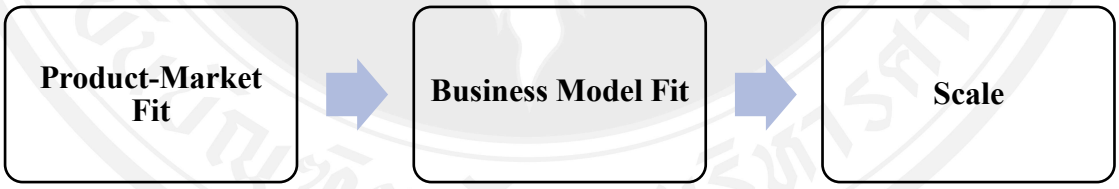

Figure 5.1 Communication Roles of EdTech Startup Entrepreneur

"My daily life changes according to the company's situation because I have been working for 6 years now. I am starting to have a management team, and it seems like I almost don't have to go to the day-to-day office anymore. I have heads overseeing various aspects. Personally, I've moved on from the CEO position and

become a full-fledged founder. In the beginning, it was quite simple; I dealt with a lot of Excel sheets. Initially, it was all about Word, and then I started doing a lot of PowerPoint presentations because I had to present to various investors. Now, I've entered into partnerships, meeting and discussing new initiatives to create new businesses, expanding internationally, focusing on languages beyond just 'Globish,' such as managing regular Facebook pages to grow the ecosystem together. We've established ourselves in the publishing industry, collaborated with writers, and utilized resources to develop and contribute to the growing ecosystem, more than just building a single brand.

Dividing it into three phases: meeting clients, defining the business model, and the scaling phase. In these three stages, I spent two years figuring out who our customers are. At that time, we were not a startup; we were a full-fledged SME, with 100% funding from our Japanese founder. We had two full-time employees and 2-3 part-time staff. We made many mistakes, thinking our customers were those with low purchasing power, assuming people who wanted to learn English had little buying power and no time to study. However, it turned out that it wasn't the case. The group of self-improvers in Thailand around 2014-2016, who were willing to invest around a hundred thousand baht per year in education but didn't want to learn from others, emerged after 10 PM when everything else was closed. Initially, we didn't encounter the managerial group; we thought they were teachers or a group of people with disabilities. We started projects with disabled people, allowing them to study from home through online platforms and a call center. It took more than two years to find them.

During the encounter, we transformed ourselves into a startup. We received investments from Tan Ichitan and R'Gu Grammy after appearing on the Flying Tiger show. YouTube revenue started pouring in, gradually reaching six figures. Our team grew from two full-time employees to 20. We developed our systems, using Skype, Microsoft Excel, and creating our website and video call system. Our original Filipino teachers became premium, and we also had foreign teachers. We started developing our own curriculum. We initially operated as a matchmaking service, but realizing it lacked quality control, we transitioned into a school. This was the phase where we

encountered the right business model, the correct pricing strategy, selling on an annual and six-month basis, and promising real results, not just convenience.

Once the business model fit, we entered the scaling phase. We went from six figures to seven figures per month. Our team expanded from 20 to 100 within half a year, and currently, we have around 140 employees. Our teacher team scaled just like our employee team, growing from 20 to 100. We realized that to expand, we needed to cater not only to adults but also to children and B2B. From having five courses, we expanded to 40, diversifying our offerings. As we entered this new phase, which I call the Business Development phase, selling English language services would cap out due to the limited number of people adopting technology and the population of Thailand. Therefore, I believe we need to establish partnerships, share our know-how, and move towards teachers with more entrepreneurial skills. This is approximately the three stages: the initial struggling phase, finding the right business model, and then scaling." Takarn Ananthothai from Globish

"I think it's a similar stage. Currently, Conicle is six years old. Every year, we call it a job description, and I change it every year. In the first year, it was like there were two of us, and we had to do everything. In other words, speaking simply, the co-founder programmed, and anything not related to programming was done by me. I remember the first year; we were fortunate to have the first customer come in quickly. Initially, we intended to focus on B2C, meaning a platform like Udemy, with a primary focus on tutors. We wanted to attract the general public, especially high school students, to learn from home rather than going to distant teachers. It worked well, with traction and revenue coming in reasonably. However, it was seasonal, entering the mid-season and suddenly disappearing.

From a financial perspective, it wasn't quite satisfactory, and the burn rate was high. So, we pivoted to B2B, and fortunately, we got customers quickly, such as AIS. We continued this path and pivoted to a B2B model.

In the first two years, we explored ourselves in terms of business and passion. We questioned if our abilities and intentions align with creating a scalable platform, allowing people to use it, make an impact, and change their lives for the better. This was our intention. During these two years, from two people, we became four. Both my co-founder and I didn't take a salary; we were burning money, and it was a

challenging time. We understood that startups are difficult, and success is achieved by encountering opportunities, pivoting, getting customers, and adapting the business model. Throughout this journey, there were people who referred customers, provided advice, and we are grateful for the assistance.

If we divide it into three phases, the first phase, with about five people, is the Survival Stage, focusing on Product-Market Fit. The business model might not work well, and it's a period of exploration and experimentation until it takes off. Phase 2, the Building Stage, comes when there is Product-Market Fit, the business model takes off, and there are revenue streams to support the team. This is when the team is expanded. Building Stage is crucial for founders to lead the team effectively. Initially, it was like freelancing, but later on, as the team grew, it became more like having team leaders and a structure.

Building Stage is about building the product, the team, and each person who joins is significant. As we expanded from 4-5 people to around 30, the roles became critical. In this stage, the founder needs to be a leader and delegate tasks. It's a critical phase, and if not done well, there can be confusion and turnover. Culture becomes essential, and turnover may occur due to differences in organizational fit. This stage builds towards scalability, focusing on People, Product, Customer, and Profit.

The challenge in Phase 2 is to move to Phase 3 and achieve scalability. If everything is bottlenecked, whether at the founder level or product level, scalability becomes difficult. It's a challenging phase, and if not handled properly, it can lead to stagnation or decline.

Conicle was fortunate to receive advice to move towards Software as a Service (SaaS), creating software suites, and providing subscription-based services to organizations. This business model proved to be successful, and now, with around 80 customers, there are plans to reach a hundred in the coming year.

The second aspect is about Product. In each phase, the CTO had to rebuild the technology, with a focus on launching quickly, getting users, and setting up a robust backend system for scalability. Technology landscape and scalability are crucial.

The third aspect is Profit, as funding is essential due to high burn rates. Seeking investors becomes crucial when entering Phase 2, demonstrating that there is a product, customers, and a team, and now it's moving towards scalability.

In Phase 3, scalability is vital as competitors emerge, both from local and international fronts. Newcomers join the industry, and it becomes a challenge to maintain the competitive edge. The three key aspects in this phase are People, Product, and Profit, focusing on creating a scalable and sustainable business model.” Nakorn Phuekphiphatmet from Conicle

“I have never worked for a company or anything like that before. I studied in an academic field. It all started because we graduated and wanted to find something to do together that would be fulfilling. We didn’t want to work for a company or become teachers.

My experience as an academic-oriented person involved tutoring. Many of us did part-time tutoring to earn extra income. I wondered if there were ways to tutor online. Nowadays, there are many online courses available, but when I started about 5-6 years ago, there were only a few. One of my friends is a renowned math tutor for students aiming to enter medical school. His popularity led to long waiting lists for his tutoring sessions. However, he couldn’t scale up, and I saw it as a missed opportunity. On one hand, it was a missed opportunity for him in terms of scaling. On the other hand, students missed out because, despite his excellent tutoring, they couldn’t access him.

So, we thought of creating a website for online tutoring. Initially, we offered free exam solutions on the website. As more people visited, we transitioned to selling online courses. It started with math courses, and after our success with these courses, we expanded by bringing in other tutors. I invested as co-founder and started a small studio to record and produce videos. We found tutors through the website, filmed their sessions, and ended up with 2-3 courses. The business grew gradually. We eventually switched to teaching English and discovered that the English market was much larger than the Thai market. The scalability was immense, and our sales went from 7 to 8 digits per year. More people started using our services, both free and paid. We achieved Product-Market Fit because we entered the online course market in a language that was large enough to sustain the company.

In the beginning, we had around 10 employees, then it grew to around 10 to 40, marking the Product-Market Fit phase. For the past two years, we’ve been doing well. If we want to expand and make the brand more recognized, it will be a scaling

period. In the third phase, the employees base will jump from 50 to 100. It feels like we are becoming a large tutoring institution online.” Chula Pittayapinan from OpenDurian

5.1.3 Defining Vision and Mission of EdTech Startup Entrepreneur

From the study, it is found that EdTech startup entrepreneurs have defined a vision and mission to guide their organizations. These serve as guidelines for driving the organization, adapting to its growth phase, often involving participation in human development. This includes fostering knowledge, skills, perspectives, and improving attitudes, aligning with various factors both internally and internationally. The details are as follows:

Table 5.2 Defining Vision and Mission of EdTech Startup Entrepreneur

Passion-Driven	Opportunities-Driven	Expertise-Driven	Implicit

“Each stage will see the vision expanding continuously. I refer to the stages according to the book “Blitzscaling.” It starts as a family with a small group, grows into a tribe, evolves into a village, and we are now entering the city, correlating with the organization’s growth. I believe that values come later because, in the initial stages, they don’t require much discussion. Values are something we demonstrate every day. However, vision needs discussion about who we are. Initially, our vision was, “For those who pursue English can speak English.” It was purely about English language proficiency. But as time passed, we realized that our focus needed to broaden.

We started looking at other aspects beyond language, such as confidence levels, communication skills, and creativity. When we engage with Thais, sometimes we ask questions in Thai, and they struggle to respond. For example, when we ask, “What is your dream?” and then switch to English, it becomes challenging. We realized that the country is changing rapidly, but people are not adapting quickly

enough. Therefore, besides focusing on teaching English, we began to address other aspects.

Let me make it clear that we are not just teachers; we have transformed into coaches. Our role extends to the realm of psychology, understanding what issues individuals bring into their lives and how to address them. It's not just about content; it's more about the individual. We adapt according to our vision, which has evolved from merely teaching English to ensuring that we don't leave anyone behind in Thailand's globalizing world.

Our third vision corresponds to the present era. We believe it's not just about being part of the globalizing world; it's about making our curriculum and actions align with the global community. We aim to prepare locals for the global community. It's not limited to the current Thai landscape; we have offices in Vietnam, and our vision is to become a regional company. In the future, we hope to have offices in more countries, progressing toward a global community, with our eyes on China.

In the past ten years, English has been crucial for our country. In the next ten years, those who want to survive with English may survive, but those who want to thrive may do so with the Chinese language. Today, we offer Chinese language courses because it aligns with the concept of a global community." Takarn Ananthothai from Globish.

"At Conicle, we view the synergy between people and technology as fundamental. We entered the realm of learning and education with the vision to create a Cloud Academy accessible to everyone. Today, companies like AIS, CP, and PTT have their own Cloud Academies for employees, offering learning and teaching activities regularly. However, recent trends show that they are increasingly reaching out externally. For instance, someone with expertise in aviation, having trained extensively in areas such as air travel, pilot training, and ground operations, can open their university specializing in Aviation Business and recruit individuals directly.

Conicle aims to be the backbone, the cloud, and the platform for this transformation. In this model, instructors are experts, and learners are individuals engaged in their work. Especially in this era of constant change, professions are evolving. What one learns in university over four years may only retain a fraction of

its relevance after a decade. Hence, there's a need to continually relearn. Conicle's role is to make careers, learners, and instructors relevant to each other.

In Thailand, where industries are not yet highly developed, Conicle aspires to be one piece of the puzzle in creating the future industry or transforming at the individual, organizational, and national levels.

As for our mission, we aim to enable people to discover and achieve their challenges, be it at a personal or organizational level, covering knowledge, skills, evaluations, and career opportunities. We see education and career as interlinked. People learn to advance their careers, but before reaching that stage, there's a foundation, which is stimulating curiosity and the desire to learn. If we were to describe it as a brand story, Conicle, translated as "ทรงกรวย," conveys the concept of a sharp tip leading to a circle. We start from a small point, igniting curiosity, and behind the large circle, it symbolizes possibilities, enabling opportunities. Curiosity and Opportunities, represented by C and O, form Conicle." Nakorn Phuekphiphatmet from Conicle

"In general, for large organizations, they usually specify their Vision and Mission very clearly. If it's a true startup, they tell each other: 'When starting up, you should define your mission right away so that everyone who joins can see it and work towards it.' However, when I actually did it, no one sat down to think about it. It was more like, 'I want to do something in the education market, want to do something for the kids.' It's what they call an implicit mission. The three co-founders know what I want to do, but no one explicitly says, 'I want to do this.' There was no mission statement on the website.

Starting with the first group of employees, the first 10 people, everyone was chosen carefully. We never said, 'This is our Vision,' but we told each person, 'This direction seems suitable for us.' In summary, in the early stages, there wasn't much direct communication about our Mission, but everyone we brought in seemed to share a similar style, liking things in common. It's like they look for a Culture Fit. Culture was built organically, not designed. It came from the three co-founders who shared and started with the first 10 people. Initially, it wasn't very clear. I chose what I wanted to do, like launching products for students, making them truly engaged in

education as a business. I didn't do it like a charitable organization; there had to be something beneficial for students and something that generates profit. That was the first phase, and the Culture they call 'organic' emerged.

Moving on to 10 to 40 people, it becomes an 'Identity Crisis' phase. People start coming in as the second and third waves, people we didn't choose ourselves. Now we see that we didn't clearly declare our mission, and problems start arising in communication. When a marketing person comes in, they focus only on selling. An educator comes in, and they focus only on education. There's no clear mixture like when we had 10 people because everyone was a direct report to someone else.

When it reaches 40 people, it's not the same anymore. It becomes a question of who will it be. The organization begins to be fragmented, aligning with what startup coaches say: you start facing scaling problems at around 40 people. Without direct reports, it becomes chaotic for about two years. People decide what to do, and everyone runs in different directions. After living through it for two years, you realize it's not working. You need to be clear about what you want to do. We sat down to talk about our mission. Even the three co-founders didn't align initially. When there were 10 people, everyone could see what each other was doing, but with 40 people, tasks became too numerous for everyone to handle alone. We had to divide tasks. It's simple to say, on the first day, a small room with three people, we could see what each person was doing. With 40 people, it's different. Everyone separates into different rooms, and without a central mission, even the co-founders end up going in different directions. Eventually, we had to clearly define the organization's mission, come back together, and sync up. That's what allowed us to expand from 40-50 people to 100 people." Chula Pittayapinan from OpenDurian

5.1.4 Innovation Communication with Customers

From the study, it is found that innovative communication with customers is considered one of the crucial communication aspects for education startup entrepreneurs. This is because it is related to product development, services, and direct revenue generation for the organization. From the case study, it is evident that each organization has a different target customer group. Globish, for example, has customers from both the individual consumer (B2C) sector, including office

employees, parents, and students, as well as private organizations (B2B) that use products and services for employee development. On the other hand, Conicle focuses on business customers (B2B), with a target audience divided based on business job levels, such as executives, HR managers, department heads, and employees. Meanwhile, OpenDurian targets mainly individual consumers (B2C), specifically high school students. However, every organization emphasizes communication regarding outcomes, pain points, and return on investment. In addition, two-way communication with customer groups allows companies to continuously develop product and service innovations by incorporating feedback and various insightful information.

Table 5.3 Innovation Communication with Customers

Pain Point	User-Friendly	Qualitative Insights
Outcomes	Learner-Centric	Quantitative Data
Return on Investment	Track and Report	
Feedback	Progress	

“It wouldn’t work if we communicate like this to our students, like learn English, the price is affordable. We missed it in the first 1-2 years when we did this. But now we communicate in a way that might sound a bit painful, but it is an effective way to communicate, to inspire people, such as becoming a leader and feeling embarrassed about not speaking English, or being stuck in a career at this age, thinking about what’s holding you back, or how to make English sentences that make yourself look good. It’s a great insight, very local for Thais.

For parents, we would communicate something like sending your child to study in different places. Have you ever known if your child can really speak or not? But studying with Globish at home, you can see that your child can speak. Or why spend money on summer camps for 5 days, when you can study with us for a whole year for the same price. It turns into preparing your child to fit into the new society and let them hear that your child is happier with the language than just being proficient. We don’t like talking about education because personally, I don’t like

studying that much. I like the journey between studying. I like the outcome. I like to use it for something more than how good our curriculum is.

For corporate clients, we would talk about everyone already knows that you have to use English. Business progress depends on your market size. The second point is how quickly employees in the organization can adopt new information. Do you know why it didn't work in the past? The answers are similar: firstly, spending a lot on employee education but not knowing which employees actually studied. Secondly, when they come in, they leave because they are busy, they have to study with people of different ages or levels. Embarrassment with colleagues or superiors, it's all full. But when it becomes Globish, there are no time constraints. They can study 24 hours, just 25 minutes a day. They choose the teacher they want to study with, aligning with their lifestyle. If they want to study in the morning, evening, with a strict teacher or not, they can choose. The key is that we provide software to HR of each company, specifically for tracking who attends, who doesn't, and how they want to change their tickets. This group can tailor how many times executives and employees have to study. When everyone has to go on stage and speak in the 10th session, it will be a company presentation. When there is a return on investment, we don't have much trouble selling to corporate clients.

There will be no insight from anyone attending the meeting. Every insight must come from the feedback of all students or something heard from the customer group. It will not be like today, I have this idea, but it will be like today I heard students say this. If it's something that can be implemented, do it. I know features after students. For example, teachers teach and feel the need for a whiteboard to write on. Parents feel that their children must have something to write on. I still don't agree. Two weeks later, I see a whiteboard or I go to see why Globish has stickers and congratulations explosions. Parents call the Dev team, so they do it, or the interface that the person felt was too difficult. They adjust it. Incremental changes will occur from the feedback of customers. But the big thing like opening Globish for kids is that we heard a lot from parents. When it's a lot, when we have funds, when we have a team, when we have the capacity to do it, we go for it. Or after we started to see that parents are not the decision-makers for their children, but the children decide for themselves, marketing begins to adjust. To be the first school where students choose

to study and parents support. The way of communication, the way of making products will change completely. Like making it like a cartoon, it has to be fun. Seeing friends come to study a lot, and today comparing with other English language schools. But I secretly see that one day they will compare it with summer camps, with taekwondo, with music lessons. Which one makes your child have fun?, Globish will be in that position." Takarn Ananthothai from Globish

"The most important external factor is our customers. We are a Corporate Enterprise B2B, so there are many roles involved. If we break it down quickly, it includes Corporate Representatives and Users, the actual users being employees since our platform is used by employees. AIS has more than tens of thousands of users, and CP has hundreds of thousands. All employees who use it fall under the category of users. The Corporate Representatives managing the platform are HR. Within HR, they sync with Line Managers and have their Organization Chart. Besides the learners who are HR employees and Line Managers, there are Subject Mentors, Experts, Content Editors, and Content Admins - those who create content. Often, they could be HR or Line Managers themselves or heads of specific work areas, functions, or external individuals brought into the organization. Lastly, the top management, these five individuals, will have different insights.

Users seek a learning experience that is easy to use, easily accessible, and not boring. They see it as a responsibility, but if they do it, they want to enjoy it. It shouldn't be difficult.

HR has to manage everything. This means a stable system, an easy-to-use system with functions that help HR work faster. For example, delivering course content, tracking learning progress, generating reports, and planning learning activities are all things HR wants. And they want to see the results of their work.

Line Managers say they want the platform to facilitate their work. For example, having notifications about team members needing training, syncing with supervisors, and seeing how it changes their team - evaluation.

Content Admins and Content Editors write content in various forms - videos, podcasts, live sessions, quizzes. This helps design learning, making it okay.

Finally, the management cares about real transformation, whether there's a return on investment, and if the employees in their organization are genuinely happy.

These are stakeholders, and all have to be approached, but the main decision-makers will be HR and the management. Currently, for an organization with about 40 subscriptions, they are divided into platform subscriptions, content subscriptions, and both.

Now, let's tackle the question of how to make this happen. So, there's a focus on creating a platform that is learner-focused and provides a learning experience. Because execution is crucial - when it comes to learning, people tend to feel bored, but making it enjoyable and user-friendly is essential. Learner-centricity is something that, when given feedback, customers will like. It needs to be user-friendly and learner-centric. One thing that has received feedback is that the platform must be attractive. The platform itself needs to have Data-Driven Social and Gamification. These are components that make learning enjoyable and lead to practical application. It involves Action Learning on the platform, with modules like Learn, Share, Apply, To-Do Lists, Mentors, and Project Assignments." Nakorn Phuekphiphatmet from Conicle

"It involves talking to customers, and there are two types of conversations: quantitative and qualitative. Qualitative communication comes first. We engage with customers over time through posts, using human language. We ask, 'Do you like this? How about that? What improvements would you suggest?' We inquire if the courses are effective or not. We reach out to our customers who have used both our free and paid products, asking how we can improve. However, as an EdTech company, we have another approach, the quantitative one. We look at data. For instance, we run advertisements targeting 100,000 people across Thailand. We check how many responded to the message, conduct A/B testing to see which message resonates more with people, and then develop accordingly. We use both methods - qualitative to generate ideas and quantitative to test those ideas. This is different from the past. Previously, to reach millions of people, you had to do TV ads, set up billboards, but you couldn't measure feedback. Now, I run ads on Facebook, pay a certain amount, and see how many people are interested, click, view, and purchase. This is what new-age companies do - they leverage data to help them." Chula Pittayapinan from OpenDurian

5.1.5 Innovation Communication with Employees

Innovation communication with employees is another crucial aspect for entrepreneurs as it relates to product and service creation, organizational development, and adds value to the company. Research reveals that entrepreneurs communicate with employees on three main fronts:

Communication for Business Generation: Involves operations and activities across the entire organization to generate business.

Communication to Cultivate Organizational Culture: Relates to establishing shared values among individuals within the organization.

Situation-based Communication: Deals with events outside the normal scope, both positive events such as celebrations of success and goal achievements, and negative events such as crisis communication.

Furthermore, communication aligns with the organizational structure designed for minimal hierarchy, incorporating representatives from each department to facilitate the exchange of perspectives, ideas, and expertise. This collaborative approach leads to the generation of new innovations.

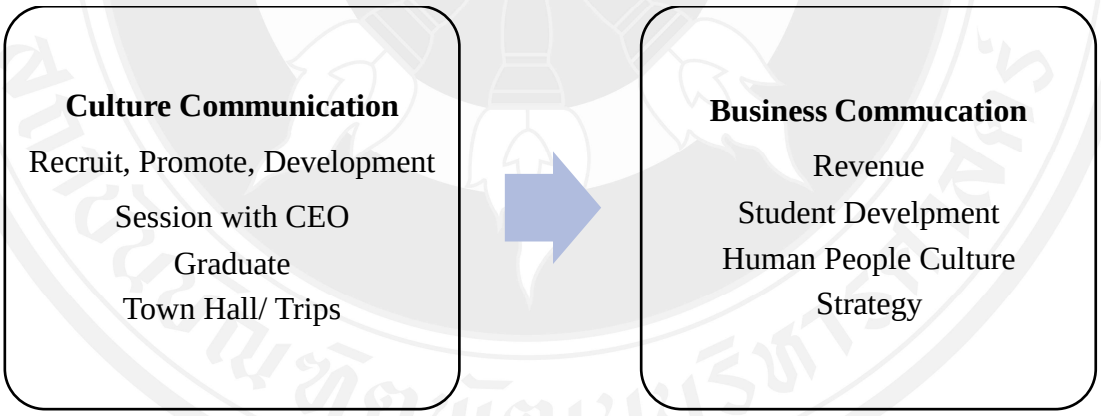

Figure 5.2 Innovation Communication with Employees

“I believe that communication serves two objectives: communication for business and communication for culture. When communicating for culture, I think the approach should be consistent, regardless of the level. In terms of culture, we are highly popular and serve as a case study in many places. We hire approximately 5 to

10 employees per month, but we interview around 500 people each month. We use various methods, including headhunting, and go through a rigorous probation process, which is relatively long. However, those who pass the probation have a session with me, usually in groups of 3 to 4 people for about 3 hours, to discuss culture.

To make communication clear, I emphasize that Globish is like a school. People shouldn't just see it as a workplace; everyone should invest in working here because they learn and acquire skills. Then, their career becomes theirs, and we are ready to support them. For instance, if someone expresses the desire to become a CEO, we have regular discussions every six months to check their progress. We also maintain flexibility in this regard.

Every two weeks, we bring in employees who have graduated, those who have worked until they feel satisfied and decide to leave. Everyone waits for their turn to graduate, and during this session, they share their reasons for joining and what they plan to do next. This process helps generate insights for the marketing and sales teams.

Internally, each team has different working hours based on what they've built around themselves, as long as communication and work management remain effective. Our Globish service operates 24 hours a day because our customers purchase heavily from 10 PM to 12 AM. Classes may extend until midnight, so we have teams working different shifts throughout the day.

Regarding business communication, we divide employees into four functions and three levels. The four functions are Revenue, Student Development (which focuses on insights and supports marketing and sales), Human People Culture (which emphasizes human-centric aspects, generating insights, and data visualization), and Strategy (looking at non-revenue-related aspects but contributing to the creation of certain values).

Every two weeks, we conduct Town Hall meetings; every quarter, we have Functional Trips and Team Trips. Additionally, we organize Planning Trips for the core team and Founder Trips. I try to ensure that much of our activities happen outside the company because I believe true bonding occurs outside, not within the office.

Internally, each team has its working hours, and as long as they communicate and manage their work effectively, we allow flexibility. We also have a robust communication channel, including Functional Trips, where employees from all levels and functions present their insights.

For the Culture function, we have recruiters, employee branding specialists, and a social engagement team that goes out to engage with communities. We believe in developing a strong culture within the company and encourage employees to participate in various activities.

In terms of the level, we distinguish between those who excel in tasks, those who excel in interpersonal skills, and those who excel in strategic thinking. KPIs vary, and each level has a different role within the organization.

Finally, regarding Culture, we focus on three main aspects: promoting and developing employees, promoting from within, and promoting employee exits. We have 140 employees, and we consider ourselves a large startup in Thailand. The average age of our employees is 24-25, and we constantly aim to maintain a 5% turnover to ensure a healthy working environment.” Takarn Ananthothai from Globish

Table 5.4 Innovation Communication with Employees by Organization Structure

Executives-Strategy and Synergy
Managers/Directors-Development and Culture
Operators-Produce Outcomes

“The structure of Conicle is that we try to be as flat as possible. However, as people start to approach a hundred, it becomes impossible to manage the entire team. So, we have introduced Team Leads. These Team Leads are assigned based on functions such as Product Design, Development, QA, Sales, PM, CRM, and Marketing. Each Team Lead manages a team of approximately 5 to 10 people per function. In terms of management, there are 3 people sharing responsibilities for each function. Everything is consolidated under the CEO, who reports to the board

quarterly and annually. The CEO operates according to the authority granted by the shareholders.

Team Leads have their own authority in carrying out their work and have designated areas for creativity.

In the role of management, our responsibility is to provide clear direction, whether it's in communicating the meaning of Conicle's Vision, Mission, Product Strategy, Business Strategy, or Core Values. We emphasize what Conicle considers important. As we move into Stage 3, adjustments are necessary for everyone."

Table 5.5 Innovation Communication with Employees based on Organization Structure

One-on-One
Feedback | Problems | Ideas
Function-Based Small Group
Product | Design | Development | QA | Sales | PM | CRM | Marketing
Cross Team Process-Based Medium Group
Customer Development | Product Development | Content Development
Finance/ Account | People Recruit | People Evaluation
Town Hall All-Hands Meeting Large Group
Culture | Values | Vision | Mission | Annual | Quarterly

There are 4 kind of communication based on organization structure; One-on-One, Small Group, Medium Group, and All-Hands. In the "One-on-One" segment, Management, including the CEO, CTO, and COO, must allocate time for individual discussions with employees. This is crucial because, in the past, I used to talk more, but now I need to listen more. We need to listen more because we may not be aware of everything happening; Team Leads might know before us. If we are not aware or are slow to know, the organization may head in a direction without synergy or have issues with teamwork. If there is a problem, we can address it promptly, or if there is a good idea, we can implement it.

Following “One-on-One,” we move to the smaller circle. Currently, this is organized by function. For example, in the Sales circle, the Sales team gathers to discuss their direction. The middle circle represents a horizontal alignment along the process. Currently, we have around 6 main processes: Customer Development, Product Development, Content Development, Finance/Accounting, People Recruitment, and People Evaluation. These are processes that cross teams, such as Sales, PM, CRM, and Accounting. Team Leads or team representatives may come together to discuss stability, technology perspectives, scalability, data importance, and data protection.

In the larger circle, the All-Hands meeting involves the entire organization and covers important topics like Culture, Values, Vision, Mission, Annual, and Quarterly discussions. These discussions are placed in the big circle.

Currently, we are using Facebook Workplace and have implemented group chats, following the traditional One-on-One format: one-on-one, team by team, department by department, and an overall All-Hands discussion. This online communication channel became prominent during the COVID-19 pandemic when everyone started working from home. Platforms like Line and Facebook were not sufficient, so we turned to Workplace. This has become a valuable tool for communication.

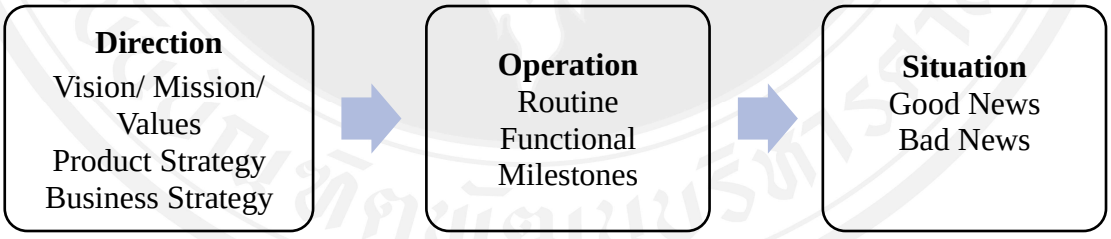

Figure 5.3 Types of Information for Innovation Communication with Employees

“The communication will have information in three types. Firstly, communication about Direction, which involves the core values and strategy. This is the big picture. Secondly, communication about Operation, which includes routine tasks, both in the central and small blocks, such as project initiation and closure.

Milestone points are essential for each function in the project. Thirdly, Situation communication involves handling disasters, discovering new opportunities, and sharing knowledge. It includes both positive and negative aspects. The third type is not routine; it presents challenges.

The second aspect can bring stability by ensuring effective communication within each team. The first aspect involves science and art. It requires storytelling and a shared vision among team members. Having a good CEO or leader helps everyone see the same picture, making work easier. The third aspect is divided into Good News and Bad News. Celebrating achievements together is not difficult, but discussing bad news, such as someone making a mistake, requires starting with empathy. If the outcome is negative, supporting and fixing the situation becomes crucial.

Our culture dictates that leaders take responsibility for everything. If a team does something wrong, even if the leader was unaware during the process, the leader must take responsibility. This involves fixing the issue, apologizing to customers, and facing consequences. Mistakes should be learning opportunities, preventing others from making the same errors. Importantly, in the broader perspective, this prevents the overall system from breaking down. If the person who made a mistake becomes a leader, they will know how to handle situations and avoid similar mistakes in the future.” Nakorn Phuekphiphatmet from Conicle

“The three of us will divide ourselves into different directions: Accounting, Administration, Marketing, Media, and then Dev, which is the Tech side. It will be divided roughly like this. Each person will take on the responsibility of overseeing specific aspects. Coordination is unavoidable as we need to work together. I will organize the team in a way that resembles small pots. One person comes from various units, including marketers, graphic designers, media specialists, and educators. I’ll bring them together and let them self-organize. It won’t be about me or the co-founder directly instructing the team. When we track progress, the whole team will come and report to the co-founder. We won’t get involved in day-to-day operations. They will run their own show, taking responsibility for their specific areas. For example, the marketing person will be accountable for sales and content quality, deciding what type of content to produce.” Chula Pittayapinan from OpenDurian.

Table 5.6 Innovation Communication with Employees

Agile	Self Organize	Cross Pollinate

"I like team organization in an agile manner, allowing them to self-organize into small and flexible teams. The advantage is that individuals with different expertise in each field will cross-pollinate, exchanging their expertise. This leads to more innovation and thinking outside the box when problem-solving. For instance, if it's a marketer facing a problem of not responding to customers quickly enough, they might think within their marketing framework. Without technical knowledge, they may suggest adding more staff to respond or reducing the number of customers to have more time for responses. However, if we have a tech team involved in the discussion, they might suggest using chatbots to assist and filter customer inquiries. This collaboration wouldn't happen if the teams were separate. In large organizations that are clearly divided, this kind of cross-pollination may not occur." Chula Pittayapinan from OpenDurian

5.1.6 Innovation Communication with Co-Founder

Innovation communication with co-founders is another crucial aspect for entrepreneurs because they have to work together continuously, share benefits, and contribute to the company collectively. Therefore, it is essential to have a mutual understanding, shared goals, and complementary abilities and skills. Communication with co-founders should adhere to the principles of respect and mutual trust, clarifying roles and responsibilities clearly, and placing importance on the decision-making role of each individual.

Table 5.7 Innovation Communication with Co-Founder

Intangible/Qualitative	Trust and Respect
Vision & Situation	Journey Matching
Compromise/Decisive	Alpha/Beta

“I have 6 founders, and we’re all equal, whether as older or younger siblings, or even as romantic partners. It’s a new-age setup where we share everything. As a founder, I don’t run much with KPIs; I lean towards qualitative aspects. Therefore, when founders communicate, I won’t say what each person must deliver. Instead, I’ll explain the situation and let whoever is fastest in responding take action.

As a result, we don’t have a fixed agenda among the founders. For example, one founder might be at Chulalongkorn University talking to the dean, another might be filming a TV show, and yet another might be overseeing the marketing team. When we communicate, we discuss the situation, each person’s happiness, and when talking about the company’s performance, we touch on the vision: whether things are going as planned, if we still want to continue, and who needs help where.

Many of our founders aren’t in leadership positions. Some are involved in operations, some are managers, and my younger brother is in sales, focusing solely on selling. When I communicate with founders, it’s not like communicating with executives who have KPIs and ROI to deliver. When real problems arise, I have to turn to the founders because they’ve been with us since the beginning and truly understand the company.

Among the founders, we don’t often have problems. It may seem bipolar—I compromise a lot, but when there’s a serious issue, I put forward my final decision because, ultimately, I am the CEO. Everyone else is an employee. We can talk as founders, but when I put on the CEO hat, I can dismiss anyone. And if I make a decision, that’s the end, as this company doesn’t operate on voting. If I decide, it’s final.” Takarn Ananthothai from Globish

“To be honest, I have to say that in every aspect of communication, I believe that Co-Founders are like partners; you have to discuss everything until the chemistry aligns. Honestly, I don’t remember the statistics, but the most common reason for a startup to fail is the Co-Founders breaking up. Conicle wasn’t smooth either; I think it would be challenging if I and the Co-Founder didn’t get along, because what we face is a lot of pressure. There have been many instances that made me understand that startups are difficult—not just in terms of making money. It’s challenging due to the people involved.

I believe that the first point is about trust and respect. In terms of business, Co-Founders should trust my decisions. Conversely, in technology matters, I leave it to their expertise. It's about specialization, but the essence is that even if we like different things, we need to know our roles. We should let them make decisions and take responsibility. The second point is that the journey should be a close match, maybe more than half, say 80%. The remaining 20% requires adjustments. Finally, it's like being partners. Okay, you know how this person is; we might have to adjust ourselves in the remaining aspects. Once it clicks, the work flows smoothly.

Another thing is not to think small. I think there's a time for things to fall into place. Suppose I work a lot, and the other person works less. But if you look at the big picture, there might be cases where one person works more and the other less. I think this is like having different virtues. You need to find people with balanced virtues—diligent enough, with a long-term vision, passion, and abilities. Or adjust to each other enough to move forward together before growing together.

Lastly, there must be an Alpha Beta dynamic. One is that I am slightly older than the Co-Founder, but age is not crucial in the modern context. Confidence comes from abilities developed through experience, which is important. I think Alpha is someone with an overall technical perspective, perhaps a CEO, CTO, COO, or CFO, but ultimately, the CEO should lead. However, it goes back to the first point; if it's a technical matter, let them lead.

Regarding raising funds, let's talk about it. If the discussion doesn't align, I think it's best not to rush into anything. Stay calm, let time pass, and when the situation relaxes, you'll see a clearer picture. Then, it's okay; see eye to eye. Sometimes it's a matter of timing. Rushing to do something might not be as good as waiting for the right moments. The Alpha must listen to others a lot. In the end, it's like going for a vote, and then think. It might not be A and B but turns into C, where both A and B are happy, not a hundred percent but happy. Reduce it a bit, but happiness remains." Nakorn Phuekphiphatmet from Conicle

5.1.7 Innovation Communication with Investors

When startups enter a phase of expansion and need additional funding, it is essential to communicate with investors to facilitate business growth. From the perspective of entrepreneurs, as seen in case studies, it is evident that entrepreneurs should view investors as equity partners rather than creditors. Therefore, it is necessary to have common goals and beliefs, which are more crucial than financial figures. Furthermore, investors can provide insights and advice to entrepreneurs, contributing valuable perspectives beyond just financial considerations.

Table 5.8 Innovation Communication with Investors

Vision	Direction	Users and Sales Results
Valuation	Finance	
Rights	Advice	

“Investor, I will look at the vision first. If they see Globish as just a language school, they may not want to collaborate with us. If they see us as a skill preparation for future work, we would be more okay with it. If they view Globish as a profit organization, we would not want to join because we prefer to position ourselves as non-profit. Many projects we undertake don’t generate any profit, like the one we did with Chulalongkorn University, providing our platform to various schools to survive during the COVID-19 period. We invest a lot of resources, but we don’t make any profit because we don’t expect to. We teach for free, provide free medical student tutoring through our platform, and work on projects like education consulting with CP, SCG, SCB. We are a loss-making company, losing millions in a year. From an investor’s perspective, it’s about self-preservation, but from the founders’ perspective, it’s something we have to do. So, when communicating with investors, the big picture is about the vision. When the time comes, we can discuss two other things: stock value and decision-making rights.

As for stock value, I don’t need to discuss it much with investors. We have 6-7 investors in total, but I will communicate with just one representative. The rest will be informed and asked for advice, but I would prefer not to involve them in decision-

making. I want to keep things agile. However, every time we raise funds, we have to discuss pricing with both old and new investors, as well as rights between old and new investors. For example, regarding rights, when I hire a new high-level person, I would ask them to have a stake in the hiring decision. Or when I plan to go public with information about the company's value, I have to inform the internal team first, which is normal.

Since our culture is strong, it has also influenced the investors. Nowadays, investors come to the office almost every week, communicate directly with my team, schedule meetings to provide advice, propose directions, and my team decides whether to accept or not. They also have the right to communicate with investors, just like we do. We genuinely work as a team." Takarn Ananthothai from Globish

"I think of investors as friends, in the sense that investors may have more experience than the typical startup founders. My co-founder and I, in our early 30s, have around 50-60-year-old investors, who are more seasoned. The key to communication is leveraging our strengths to build trust. We discuss the direction before investors invest in us. They are not creditors; they are business partners. The image has to match.

When it comes to Conicle's exit strategy, whether through entering the stock market or expanding internationally, we have to discuss it. Regarding finance, I see it as a secondary matter. If the numbers are okay but the visions don't align, it won't work. It has to be like friends, genuine. If the company faces issues, we tell them how to fix it, and they genuinely want to hear. They provide advice.

As stakeholders increase, transparency becomes crucial. Managing the company and tuning the direction with the board to align perspectives are essential. It's about being transparent and looking at it as a long-term partnership." Nakorn Phuekphiphatmet from Conicle.

"I'm not good at talking to investors. I'm like a kid from a provincial town. I once tried to do something like this on my own for a while and felt that it didn't work well because it felt like a waste of time. I didn't know how to communicate, didn't understand the language they spoke. So, I invited friends to join and produce together. It turned out that when we produced something, there was income coming in, and we

could sell it. About 2-3 years later, I started talking to investors, roughly a year or two ago.

I wanted to show them first that I am doing something that is really sellable, and real people are using it. I took the numbers and showed them. I showed them the numbers and said it works. If it aligns with your style, come and invest. It's straightforward. I prefer talking with numbers and results rather than talking about building dreams or selling dreams. It's about showing and proving. If it matches your style, invest. That's what I like-talking with numbers and achievements more than talking about building dreams." Chula Pittayapinan from OpenDurian

5.1.8 Innovation Communication with Partners

In studying innovation communication with business partners, it was found that business partners are another crucial group with significant impacts on the operations and growth of the company. Entrepreneurs will communicate about the direction of the business, emphasizing the big picture in the long term.

"I would like to communicate roughly that my direction is to prepare people to adapt to the working environment. However, preparing alone is not sufficient. There are schools, particularly offline ones, that want to go online, and we will either assist them directly or through partners such as the Chulalongkorn University Engineering Department. The entire system used by Chulalongkorn University's demonstration school, both primary and secondary, is called Smart School. We collaborate with Chulalongkorn University and Frog Genius from Slingshot, where we teach executives about one-on-one coaching. We will communicate that we want to help them go online as much as possible to reduce the friction in the learning process." Takarn Ananthothai from Globish

"Another important stakeholder is our partners, such as the Chulalongkorn Business School (CBS) accounting department. We invite them to co-create content and provide it to organizations. Content providers become partners who leverage the ecosystem. This means we have corporate entities, platforms, and a production team that instructs, digitizes the process, and sells through our customer network. This helps content providers easily deliver their knowledge to organizations. The key is whether a real economy is created. Platform businesses like Airbnb, Uber, Grab,

Shopee, and Lazada have created sub-unit economies for small businesses and hostel owners, generating continuous income. It forms an economy ecosystem where revenue streams are built. Therefore, the long-term vision of Conicle with partners is the Education Revolution and the creation of a New Economy for customers to derive value from partner content. Partners, in turn, should receive continuous revenue from our platform." Nakorn Phuekphiphatmet from Conicle

5.1.9 Innovation Communication with Stakeholders

Apart from communicating innovation with stakeholders both within and outside the organization, there are other groups as well, such as government agencies and the general public. This refers to the broader society that must engage in communication to generate knowledge and understanding of startup innovations in education. Addressing how traditional education can be improved is seen as a solution through communication with entities like government agencies and the general public.

"I think it will become a matter of society. If we are going to pursue online degrees with universities in the future, it's not just limited to B2B and B2C. It seems like we have to involve regulators as well, especially regarding the approval of certifications, diploma announcements, and degrees. It's similar to other industries where the legality of licenses is a next step. However, there will be sub-regulators, such as the Department of Skill Development, reporting to them. The current challenge is that they don't yet accept online; they only recognize offline. Also, e-signatures are not accepted. Learners have to physically sign. The point is, if it becomes seamless in the e-government sector, organizations developing it will benefit first. First, their employees will become more skilled. Is there an opportunity for improvement? Second, because the government says if you develop employees, the expenses can be used as a tax deduction twice. If you invest one million, you can deduct two million. This makes organizations focus on developing their employees, and there are financial benefits." Nakorn Phuekphiphatmet from Conicle

"I believe public opinion is crucial in this matter. EdTech, in reality, has more stakeholders than just those who create, invest, and use it. It involves parents and teachers. If we don't present a clear picture to them of why we need a change and what has caused the stagnation in Thai education, we won't have a meaningful

conversation. We also need to showcase our achievements to demonstrate that if we implement certain changes, there can be progress.

Thai education is slow to evolve because no one talks about it positively; there's only criticism and discussion of problems without offering solutions. EdTech is one group bringing technology to adapt as a solution. If we don't communicate these solutions to society, there won't be any impact. Only a small group uses it, and others wonder what they are doing.

We don't just want to present a website; we want students to access exams for free. This helps children access learning opportunities more easily. It's about solving their problems. If we don't share this with the public, they won't know what our solution is and what our plans are. Without public disclosure, there won't be impact." Chula Pittayapinan from OpenDurian

5.1.10 Innovation Communication with International Market

From the study, it is found that entrepreneurs have strategies to expand into international markets. Globish established a branch in Vietnam. The communication strategy emphasizes innovation, stating that the company's products are of higher quality (Premium Quality) compared to local products. Meanwhile, Conicle is in the consideration stage of expanding to Indonesia, Singapore, Vietnam, Malaysia, and CLMV, driven by similar digital economic development factors. As for OpenDurian, it has separated to develop Tockto VR, a virtual reality language learning product, focusing on digital products that do not require local partnerships for expansion but rather utilize online channels for sales and communication.

Table 5.9 Innovation Communication with International Market

Premium Quality	Cost Efficiency	Digital Products
Local Offices	Local Partners	Marketplace
		Social Media

"In the EdTech sector across Southeast Asia, there are two major players. One is called Topica Group, based in Vietnam, with substantial revenue of around 2 to 3

billion Thai Baht annually. The other is Ruangguru from Indonesia, which entered the Thai market under the name StartDee. It is a significant player in Indonesia and has become a unicorn. I don't believe much in the first-move strategy; I think it doesn't always work. We excel in the English language, and in Indonesia, no matter how many competitors there are, it doesn't work. Topica raised $50 million in funding, but expanding from Vietnam to Indonesia didn't work well due to the cultural differences, with a diverse population and varying internet connectivity. The Chinese community in Indonesia is fluent in English, but those who can't speak it might lack the funds for education or have poor internet connectivity. Moreover, there is a significant diversity in Indonesia, and they are quite serious about exam preparations. Career prep is not yet popular; that's why we haven't expanded to Indonesia.

The remaining countries include Vietnam because the Philippines and Malaysia speak English, Myanmar has poor internet connectivity, Cambodia has a small population, and Laos has inadequate internet. These countries are not like Vietnam and Indonesia. Malaysia might be an exception because even though not everyone speaks English, there are still many who do. In Vietnam, Topica did similar things like us and was very successful. However, they are currently facing reputation issues, being criticized for being a multi-level marketing (MLM) company, and product quality problems. So, we think entering with a higher price and better quality might work. We have a team in Vietnam consisting of around 5-6 people located in Ho Chi Minh City." Takarn Ananthothai from Globish

"We are considering expanding, and with software, there are no location restrictions. We have two components: a software platform and content that we co-create with content providers, which is feasible. However, we still need to find local partners. Where we go will likely be nearby because it's convenient and fast. They call it the stage of development in the Digital Economy, close to us. We might consider Indonesia and Singapore, perhaps a bit ahead. Still, we have greater cost efficiency than Vietnam, and then Malaysia and the CLMV countries might follow suit, approximately within the next 3 years. This is where we want to go." Nakorn Phuekphiphatmet from Conicle

"Why do we think about going global? In the past, before starting the business, if we wanted to go international, we had to attend fairs, seek out local

partners. Nowadays, with an app, it’s much easier. We want them to see it, so we put it on the App Store and advertise on Facebook and YouTube. People see it, try it, and if they like it, they continue to use it. Now, we observe learning behaviors, which vary in different regions. In the Western world, they don’t focus much on exams. In contrast, in Thailand, China, Japan, and neighboring Asian countries, studying is often exam-oriented. In the East, people are willing to pay a high price to pass exams, while in the West, they study for effective communication. Therefore, the way lessons are structured is different. In Asia, it’s necessary to include grammar and have someone teach it. I gather qualitative information by posting questions for people to answer. Whatever seems promising, we implement it and then analyze quantitative data to see how it’s received.” Chula Pittayapinan from OpenDurian

5.2 Innovation Communication of Government Agency

For the study of innovation communication of government agency, in-depth interviews was conducted with representatives from government agency responsible for innovation. Key informant in the interviews was Dr. Pun-Arj Chairatana from NIA, the Director of the National Innovation Agency (NIA). The following are the key points discussed:

5.2.1 Government Agency’s Perspective on EdTech Startup in Thailand

5.2.2 Innovation Communication Roles of Government Agency

5.2.3 Innovation Communication Policy of Government Agency

5.2.1 Government Agency’s Perspective on EdTech Startup in Thailand

From the perspective of the government agency on EdTech startup in Thailand, it is found that there is an emphasis on the issue of decentralization in education. This involves shifting power away from traditional educational institutions, such as schools and universities, towards new learning content and channels. However, there are concerns regarding inequality in accessing technological innovation, where those who have access may have significant advantages over those who do not.

“EdTech is the decentralization of power in education. If we look at it from an innovation standpoint, it’s like being decentralized in creating innovation from companies or labs to the general public. Similarly, in education, it’s a societal condition where people who are not satisfied with their status want to elevate themselves. It’s about seeking knowledge because you want opportunities for employment, not just societal status. However, in the current changing society, it is appropriate. People with potential in seeking knowledge.

EdTech, from an extreme perspective, involves a group of people who deviate from the standard education system. EdTech facilitates this deviation because it enables them to do so. The image of schools or higher education institutions does not necessarily address these questions in the distant future; if they do so now, it’s because they have to. Some argue about specific professions that require licensing, such as engineering or medicine. Still, it’s not always the case. We need to look back and see that the terms ‘school’ and ‘university’ today answer to what type of society.

Currently, EdTech is still in the stage of being a platform, a supportive tool, belief, process, and mindset in managing teaching and learning. But it doesn’t mean that teaching and learning will be perpetual. EdTech is a tool that promotes freedom in learning for those who are ready to learn. At the same time, some people are not in a state to explore and lack the motivation. They have to rely on the traditional system. But in the future, how much longer will it be? Another 2-3 generations, institutions, whether government, universities, schools, or religion, will be entirely disrupted.

EdTech is already helping change this. Those at the top of the pyramid are very comfortable, accessing the world of knowledge globally, learning quickly. However, it reflects that we have inequality in accessing EdTech tools. Should these tools be universally accessible, like basic rights, for all children? COVID has accelerated the transition to digital education because going to school or university is not possible. The challenge is that if you believe EdTech is a platform, it’s like a right, similar to free education, is it like that, or will it be tied to schools?

In the end, the values of pursuing higher education, completing a master’s or doctorate, will still exist in the future because it is a social status. But at that point, there will be another group saying they are not interested because their world is not there. So, sharing values from the past to the present, it’s not certain that the new

generation will think the same. I believe it has changed a lot. The key phrase now is the decentralization of the education system. But EdTech, which is doing that, is not a platform that we have provided; it is for anyone. Therefore, if large corporations come in and continue to do it, it will be decentralized in another aspect. It's not just about digital platforms; it's about the power to create people." Dr.Pun-Arj Chairatana from NIA

5.2.2 Innovation Communication Roles of Government Agency

From the study of innovation communication roles of government agency, it is found that the National Innovation Agency is tasked with communicating with various sectors in society, including business sectors such as SMEs and startups, as well as large private sectors, the government, the education sector, and the financial sector. The agency has a directive to present national-level policies that connect and integrate all sectors.

"We are the National Innovation Agency. Our establishment is governed by law, and we operate in five dimensions. The first dimension is providing funding for post-research activities. This means we do not fund research; instead, we provide funding for post-research activities. We collaborate primarily with the private sector, including startups and SMEs, and provide funding for innovative projects that can be commercialized or used for the benefit of society.

The second dimension involves policy advocacy. When we are in our roles, we must advocate for policies that guide the country's progress. We strive to convey our opinions to the government, highlighting the policies needed for innovation if we want to be an innovative nation.

The third dimension is the development of systems in both the industrial and societal contexts, related to driving the Value Chain of innovation. The fourth dimension is supporting individuals to manage innovation within organizations. Finally, the fifth dimension is creating awareness and understanding of the importance of innovation for the country.

This concerns everyone. Everyone is involved, including knowledge creators such as research institutions, universities, students, and companies of all sizes. Another group is focused on the private sector, including those not directly involved

in innovation transactions but providing support, such as banks and law firms. The third group includes general government agencies that both use and resist innovation. The last group is society at large, divided into four main segments.

Innovation is what improves our way of life, livelihoods, and the betterment of our businesses. The term ‘betterment’ can be measured in various ways, including increased income and improved convenience, not necessarily tangible but essential for progress. Therefore, the definition of innovation has changed over time, and it is a fundamental tool for driving society and the economy forward.

Not everything novel is innovative. Innovation is something that is difficult to imitate. It is a feature that companies or organizations seek to protect from competitors. But when it comes to innovation in society, you want people to emulate and use it for the greater good, reducing inequality and providing equal opportunities for accessing various infrastructure. This is about distribution, and the faster it spreads, the better. Therefore, looking at innovation from the past to the present, it has become more complex but has infiltrated every profession or lifestyle of everyone.

The point at which we initiated the Innovation Thailand campaign was initially a communication tool. Then we began to realize that having a communication tool is a powerful asset, but it’s challenging to move towards something called ‘belief.’ However, not doing it is not an option. This became the starting point for the Innovation Thailand project, where we strive to make Thais and foreigners perceive innovation in Thailand beyond just som tam (papaya salad) or tom yum goong (spicy shrimp soup).

We have organizations and companies with innovative creators who have stories to tell and have reached a world-class level. However, the question is whether Thai people believe in them and are aware of them. Thai people are not aware of these contents. How can we make these contents widely spread and change the mindset of individuals looking at Thailand’s innovation identity? If we look at ‘Made in Thailand’ from the past until now, do Thai people start to believe more in Thai products? I believe there has been a significant change. Thai people are starting to believe and use Thai products more than ever before. But the question is, are we setting up a systematic way to communicate? The answer is no. It is organic, and it is

not systematic. It does not work this way. In every industry, it is specific to the industries where we have Thai players. This is the first challenge.

The second challenge is how the government perceives communication in innovation. I think we are too focused on technological innovation and research, forgetting that we need to shape the image of large companies that currently have a negative image in society. The contribution they make to innovation and the country is enormous. Still, the way we tell the story and communicate makes it seem like large companies are evil. This is a challenge because we need to find a way to make people look at the contribution of large companies positively and creatively. Many countries already have two perspectives. In countries leading in innovation, large companies are seen as villains but are also a source of pride for the nation. However, we have not reached that point yet. It's either we complain about large companies monopolizing or we want them to become unicorns. If they become unicorns, they will start seeking maximum profits, and it is in line with the system. This is the second challenge - how do we communicate the contribution of large companies positively in the field of innovation?

The last challenge is that the government often talks a lot about rankings, but it's not clear because some leaders say it's not important; we need to make Thailand good first. Still, in principle, we force government agencies to improve the country's ranking. In summary, is it important or not? The goal is to escape from the middle-income trap and be an innovative nation. But if you don't use these indicators to measure, do you have the right measures? Therefore, it's just rhetoric and talking for fun. Talking and communicating are enjoyable, but in the end, what are you communicating to society?

If the news is not good, the media spins it. For example, why is Vietnam about to surpass Thailand, or has it already surpassed it? Some years Thailand surpassed Vietnam, but it was quiet. It depends on your perspective on Thai society. Why is Malaysia surpassing us? They have 20 million people, not 70 million. But when you look at the ecosystem and business rankings, we are in the top 20 globally, better than Malaysia by almost 40 ranks, and nearly 100 ranks better than Vietnam. In the end, if you say you don't want to use this kind of data to set ambitions and communicate clearly about what you are looking for in the end, then it doesn't make sense. So, it's

rhetoric, fun talk. But in the end, if you don't use these indicators, how do you measure if you are on the right track or not? Therefore, it's a challenge in how we communicate about innovation in public discourse.

In conclusion, these are the three challenges: systematic communication, positive communication about the contribution of large companies, and setting clear goals for the nation in innovation. It's a matter of how the government perceives innovation communication with the public" Dr.Pun-Arj Chairatana from NIA

5.2.3 Innovation Communication Policy of Government Agency

From studying innovation communication policy of government agency, it is found that communication plays a crucial role in building trust, shaping perspectives, and fostering ideas that contribute to the innovation culture of the country. There will be the use of media to make the public aware and understand various innovations, including promoting a culture of learning, exploration, and knowledge discovery. This aims to facilitate access to the potential of emerging technological innovations. The details are as follows:

Table 5.10 Innovation Communication Policy of Government Agency

Creating Innovation Culture		
Short Term	Medium Term	Long Term
Inspirational Contents	Training Platforms	New Generations
Mutual Commitment to Long Term Policy		

"Direct communication is crucial, such as when we begin communicating with people within an organization. If communication is not good, it goes in a direction we may not believe in, but it doesn't necessarily mean it's an opportunity in the future. It builds trust, creates perspectives, and fosters different ways of thinking. Take the example of other countries; it's a matter of culture, but culture comes from communication, from the storytelling of those with potential. For instance, in America, communication through their innovation is clear. If it's a pre-print era, there are people who write, tell stories, speak, and act as advocates in each field, making it

easy for people to understand and communicate. Therefore, in the cultural tapestry of that group of people, communication is used to its fullest, whether it's individual communication or group communication, expanding to mass communication. There are channels to choose and receive information, and then go deeper.

In the case of Japan, it started with translating books from various languages into their own language, and people had a habit of loving to read. It was a thing of the past.

New-generation children growing up with digital technology make them search, explore, and read what they want, breaking it down without spending much time, unlike before. So, the technology we call communication technology, communication innovation, is crucial because without good content, I believe technology cannot help much. Even if we have intelligent AI that can write, create analyses, or any data, they still don't know what those images are like. They haven't reached there yet.

In the short term, I think it's about content. Content is crucial because we have to keep up with the world. When we keep up with the world, traditional teaching methods become forgettable. Accessing information, having something that interests the new generation, and creating their inspiration is the first button to press. There must be a practical field for children to practice, not waiting for the next year. These kids don't wait. But for those who don't have the opportunity, society has to provide them with opportunities because the education system is increasing social gaps, not reducing them.

In the mid-term, it's about changing the generation. Everyone has to help create a new generation. What will you input? What kind of chip will you give them? This is a significant responsibility of the Ministry of Education and universities.

In Finland, they made an agreement between the Finnish Parliament, the political parties, and the people through an organization called SITRA. They stated that the country must transition to a Circular Economy in this generation. They said they had to create a basic education system for children to grow up in an environment and belief in understanding the concept of a Circular Society. The challenge set by them was that no matter which party wins the election, they are not allowed to change this policy during the 8-year tenure of the government, which means two terms.

However, most people admire the tools and methods, but they don't see how they have a social agreement. Finland has looked into the distant future and turned it into a government policy that cannot be changed. Then the basic education system has already been created to produce a new type of person, a new generation." Dr.Pun-Arj Chairatana from NIA.

5.3 Innovation Communication of the Media

For the study of innovation communication of the media, in-depth interviews was conducted with representatives from mass media related to innovation journalism. Notably, Asina Pornwasin, the founder and Editor-in-Chief of The Story Thailand, was interviewed. The key points discussed are as follows:

5.3.1 The Media's Perspective on EdTech Startup in Thailand

5.3.2 Innovation Communication Roles of the Media

5.3.3 Innovation Communication Journalism

5.3.1 The Media's Perspective on EdTech Startup in Thailand

From the perspective of the media on EdTech startup in Thailand, it is found that the media categorizes EdTech into two main types. The first type is EdTech that utilizes technology to enhance traditional education systems, such as presenting traditional curriculum or teaching methods online and using technology to measure various assessment outcomes. The second type is EdTech that employs technology to introduce new innovations not present in traditional education systems, such as learning outside the classroom and acquiring various soft and hard skills. From the viewpoint of the media, it is observed that the second type is more interesting. This is evident both in terms of technological innovations and the overall impact on education and society.

Table 5.11 The Media's Perspective on EdTech Startup in Thailand

Technology for Traditional Education	Technology for New Education
Emphasis of Efficiency	Emphasis on Lifelong Learning

“The EdTech startup has two main areas. The first one is in education, using technology to enhance and make it smarter, better, faster, and more cost-effective, allowing greater accessibility. This often involves rethinking and innovating traditional teaching methods, such as delivering courses or conventional teaching approaches online, and using technology to assess various outcomes. The second area, which is less common, comes from a perspective that is not centered on education. It involves introducing new ways of thinking and incorporating them, sometimes requiring a significant departure from traditional educational approaches. This may include learning outside the classroom and acquiring various soft and hard skills. From the mass media perspective, the latter is seen as more interesting, both in terms of technological innovation and its broader impact on education and society.

One dimension of education, considered as mainstream education, involves learning within formal systems, from childhood to adulthood, covering compulsory education to advanced degrees. However, the concept of education is evolving to encompass lifelong learning, both within and outside formal systems. Therefore, EdTech is not just about serving students in traditional settings; it’s about introducing new approaches and enhancing the quality of life for individuals, regardless of their profession, interests, or learning preferences.

Education is an integral part of life, impacting individuals regardless of their professions or interests. EdTech should contribute to improving lives, not just by enhancing traditional education systems, but also by introducing new perspectives and innovations. The market for EdTech is seen as vast, reaching around 70 million people in Thailand, and the content it offers should not be limited to societal, scientific, educational, health, or engineering domains. It should encompass a wide range of skills, both soft and hard. The speaker believes that technology will play a significant role as people increasingly have the opportunity to study and gain understanding. The speaker emphasizes the importance of looking beyond technology within the formal education system and acknowledges that, especially after the challenges posed by the COVID-19 pandemic, the boundaries of formal education are becoming more blurred, with schools and universities having no physical barriers.” Asina Pornwasin from The Story Thailand

5.3.2 Innovation Communication Roles of the Media

From the study of innovation communication roles of the media, it is found that the trend of media, particularly online and new media, tends to be smaller in scale compared to traditional media. Therefore, mass media must have dual roles in both business and content, emphasizing the principles of mass media communication and editorial teamwork to ensure credibility.

“Due to being an online media, a newly emerging media, and a small-scale media, there are dual roles in both business and content aspects as a Co-Founder and Editor. In the past, mass media had to differentiate between revenue and content creators, being a large-scale media. However, the trend in mass media has shifted towards smaller sizes. Therefore, managers or owners must consider both aspects. This diversity includes the audience, interests of viewers and readers, and various issues, allowing us to present content in diverse formats.

We aim to be a trustworthy online media run by professional journalists, emphasizing the value proposition of providing credible news. When selecting topics, we consider both original content and discovered content, including PR news and other submissions. We evaluate the impact and relevance to people, benefits, and novelty.

Our working method follows the editorial team’s approach, which doesn’t necessarily require a large number of people, but internally, within our minds and bodies, we act as the editorial team. When considering news topics, we look for interesting and trending issues. We plan and map out the main and sub-issues, deciding who should be the source for accurate information. We conduct interviews.

To measure performance, we rely on feedback, especially comments and engagement on various platforms. Although major platforms may have similar feedback, we don’t solely base our topic selection on that dimension. We recognize the need for balance, addressing both what people want to know and what they should know. We must be versatile, as sometimes we engage in academic discussions or participate in events. We need to strike a balance because if we only focus on what people want to know, it won’t be sufficient. We must be the mass media that provides information people might not want to know but should know. It’s about finding that balance.” Asina Pornwasin from The Story Thailand

5.3.3 Innovation Communication Journalism

From the study of innovation communication journalism, it is found that the goal is to transform new and complex innovations and technologies, which are initially understood by a narrow group, into something easily understood and accessible to people in a broader audience. It is essential to present these new innovations in a way that explains how they impact people's lives, both at the individual level, business level, industrial level, and societal level.

"Actually, the starting point of innovation might be perceived as related to scientific technology. Indeed, it is, but as we continue, the term 'innovation' becomes embedded in every industry, such as innovative marketing, innovative technology, or innovative business models. It has become a catalyst across all industries. However, the core of innovation itself originates from technology-driven industries. Still, its essence is horizontal, allowing it to be applicable to any innovative industry, including media with innovations in communication, marketing, or business models.

Innovation in various aspects is challenging to understand. Firstly, it involves new concepts. Secondly, even if not difficult to understand, it's still about something new. Some aspects are challenging to comprehend, requiring time for society to be educated. This is where the role of mass media comes in. Mass media needs to learn about these challenging concepts, process them, and then convey complex stories to a wide audience in a language they can understand.

Communicating about innovation is similar to communicating about technology in the past. As a journalist with around 30 years of experience, I had to explain what technology is, how it relates to itself, and its impact. From mainframe computers to servers, PCs, smartphones, AI, blockchain, crypto, and the Internet of Things – these are all new things. We need to know and understand them, study things that are difficult or unfamiliar, and continuously encounter new articles and lessons. We must comprehend not only one topic but how everything is interconnected. We create a record of references, and when we communicate these topics to consumers, we must explain them in a way that is easy to understand, considering the context of the technology. Therefore, the role of mass media in communicating about innovation is crucial. Mass media must be the communicator of complex topics, making them easy for a broad audience to understand, creating a

bridge between the specialized and general knowledge. This is essential for effective communication.” Asina Pornwasin from The Story Thailand.

CHAPTER 6

SUMMARY, DISCUSSION, AND RECOMMENDATION

The study “Innovation Communication of EdTech Startup Entrepreneur” is a qualitative research, aimed 1) to study the innovation communication of EdTech startup ecosystem in successful countries, 2) to study the innovation communication of Edtech startup ecosystem in Thailand. The findings from documentary analysis and in-depth interviews were summarized and discussed to respond to the research objectives, including recommendations from the finding and for future studies, as follows;

6.1 Research Summary

The findings from documentary analysis and in-depth interviews were summarized and presented in two parts, responding to each research objectives, as follows:

Part 1: The summary of the study of the innovation communication of EdTech startup ecosystem in successful countries.

Part2: The summary of the study of the innovation communication of EdTech startup ecosystem in Thailand.

6.1.1 Part 1: The Summary of the Study of the Innovation Communication of EdTech Startup Ecosystem in Successful Countries

The summary of the information from public records related to innovation communication of EdTech Startup Ecosystem in United States, China, and India.

6.1.1.1 Context Level

Table 6.1 Innovation Communication of EdTech Startup Ecosystem-Context Level: Political Context

Context	United States	China	India
Political	The United States is a republic under the constitution with a stable political environment characterized by a two-party system. The government has implemented policies and regulations that support entrepreneurs and innovation, including incentive measures and tax assistance. This conducive environment facilitates the initiation and growth of businesses. Additionally, there is investment in education and technology infrastructure, creating opportunities for EdTech startups to collaborate with government agencies	The government of China is a single-party communist state with a centralized power structure. It has a complex legal system and undergoes frequent changes. The government has made significant efforts to promote entrepreneurship and innovation, including the establishment of innovation parks and substantial investment funds. Numerous initiatives have been launched to foster EdTech and educational innovations, such as "Internet Plus Education" and "National Education Informatization."	India is a democratic country with a stable political environment that promotes innovation and entrepreneurship. The government has launched several initiatives such as Digital India, Startup India, and Skill India, which support the startup ecosystem, including EdTech startups. Additionally, the government has increased spending on education, providing opportunities for EdTech startups to collaborate with the government.

Context	United States	China	India
	in presenting innovative solutions.		

Table 6.2 Innovation Communication of EdTech Startup Ecosystem-Context Level: Economic Context

Context	United States	China	India
Economic	The United States has the world's largest economy, creating a positive environment for business operations and growth. The economy is diverse and driven by various sectors such as health, finance, technology, and manufacturing. The education sector in the United States is a crucial market for EdTech startups. Schools, colleges, and universities collectively spend billions of dollars annually on educational technology. The presence of investing	China is the world's second-largest economy with a rapidly growing and substantial middle class. The government pursues policies to promote innovation and the development of high-tech industries, such as the “Made in China 2025” initiative. The expanding middle class in China is driving rapid economic growth, creating a demand for quality education. The Chinese government supports private sector investments in the	India has a rapidly growing economy with a substantial and expanding middle class willing to invest in education. A majority of the population resides in poverty and faces challenges in accessing education. This presents a challenge for EdTech startups in reaching these demographics. The cost of internet and mobile data in India is relatively low, providing an opportunity for EdTech startups to develop mobile-

Context	United States	China	India
	companies and other investors in the United States helps facilitate access to opportunities for fundraising for EdTech startups.	education industry, leading to the emergence of numerous EdTech startups.	friendly platforms for education.

Table 6.3 Innovation Communication of EdTech Startup Ecosystem-Context Level: Social Context

Context	United States	China	India
Social	The United States is a highly diverse country with varied foundations and cultural values that differ across the nation. There is a multitude of people from various ethnicities and cultures, presenting a challenge for EdTech startups to respond to diverse learning styles and cultural sensitivities. This may impact consumer behavior as	China has seen a significant rise in the middle class, with a growing emphasis on health and environmental concerns. Chinese consumers are increasingly using mobile and digital technologies to access products and services. China's education system places great importance on academic performance, and parents are willing to	Education holds great value in Indian society, and parents are willing to invest significantly in the education of their children. However, there is a significant gender gap in education, with females having lower literacy rates than males. This poses a challenge for EdTech startups in reaching and providing access to education for women and girls.

Context	United States	China	India
	consumers become more aware of societal and environmental issues, affecting their preferences for products and services.	invest significantly in the education of their children. This cultural trait has created a significant market for EdTech startups offering supplementary educational services.	India has a diverse population with multiple languages, presenting a challenge for EdTech startups to develop content that is accessible to people from all linguistic backgrounds.

Table 6.4 Innovation Communication of EdTech Startup Ecosystem-Context Level: Technological Context

Context	United States	China	India
Technological	The United States is a leader in technology innovation, with several of the world's largest technology companies based in the country. There is high-level investment in research and development, particularly in	China is a major player in many emerging technologies, such as artificial intelligence and 5G telecommunications. The government has heavily invested in research and development, establishing numerous research and technology incubation	India has a large and rapidly growing internet user base, with an increasing number of smartphone users and digital literacy. The country has a robust IT industry and a skilled community of software developers,

Context	United States	China	India
	artificial intelligence, biotechnology, and renewable energy, creating an environment conducive to the development and growth of EdTech startups. The widespread use of mobile devices and the internet in the United States opens opportunities for EdTech startups to introduce their products and services to a large and diverse audience.	centers. This has opened new opportunities for EdTech startups to create authentic and personalized learning experiences. However, there are concerns about the quality and reliability of EdTech products, as many startups lack the expertise and necessary resources for developing high-quality software and hardware.	providing an opportunity for EdTech startups to leverage these resources. However, there are challenges related to the quality of internet connectivity in rural areas, posing a challenge for EdTech startups in accessing these areas.

6.1.1.2 Industry Level

Table 6.5 Innovation Communication of EdTech Startup Ecosystem-Industry Level: Entrepreneur Sector

Industry	United States	China	India
Entrepreneur Sector	In the United States, there are initiatives for EdTech startups located in the areas of San Francisco, New York, and Boston. In San Francisco, the hub of Silicon Valley, prominent EdTech startups leverage the highly skilled technology workforce and access funding to create innovative products and services. This region benefits from a tech-savvy labor force. New York, with its renowned universities and colleges, along with a thriving media and advertising industry,	In China, Beijing and Shanghai are two major cities that have become central hubs for education startups. Beijing is home to Zhongguancun Science Park, known as the Silicon Valley of China. It is a prominent example of a startup cluster that fosters the development of EdTech startups. This park is the location of over 2,000 high-tech organizations, including numerous education-focused startups, receiving support from the Chinese government. Additionally, Shanghai has	In India, Bengaluru, also known as the Silicon Valley of India, has been a central hub for technology and startup businesses for many years. It is the location of several EdTech startups, including prominent ones like Byju's, Vedantu, Simplilearn, and Unacademy. New Delhi, the capital city of India, is also a significant center for the growth of EdTech startups. Notable EdTech startups in Delhi include Testbook, UpGrad, and Toppr.

Industry	United States	China	India
	serves as another hub. The city fosters a vibrant ecosystem for EdTech startups. Boston is also a significant center for EdTech startups, playing a crucial role in the education technology landscape.	emerged as another central hub for education startups, with many companies situated in the Zhangjiang Hi-Tech Park.	

Table 6.6 Innovation Communication of EdTech Startup Ecosystem-Industry Level: Corporate Sector

Industry	United States	China	India
Corporate Sector	In the United States, the corporate sector actively participates in the ecosystem of EdTech startups. Companies such as Google, Microsoft, and Amazon invest in and acquire EdTech startups. These companies enable startups to access various resources, including cloud computing	In China, the corporate sector also actively participates in the ecosystem of EdTech startups. Companies such as Tencent, Alibaba, and Baidu invest in and acquire EdTech startups, helping these startups access various resources, including financial and technical support.	In India, the corporate sector also actively participates in the ecosystem of EdTech startups. Companies such as Tata, Reliance, and Infosys invest in and acquire EdTech startups, enabling these startups to access various resources, including financial support,

Industry	United States	China	India
	infrastructure, marketing and distribution channels, and expertise in various areas such as artificial intelligence and machine learning. Various initiatives, such as startup incubators, accelerator programs, and organizational venture funds, provide EdTech startups with access to resources such as funding, mentorship, and expertise.	Additionally, these companies provide startups with access to large user bases through their platforms. Open opportunities for collaboration allow organizations to work closely with EdTech startups and benefit from their innovative solutions. Furthermore, organizational partnerships serve as a tool to assist EdTech startups.	technical expertise, and knowledge in different areas such as data analytics and cloud computing. Facilitating access to resources, expertise, and networks that help scale operations and drive innovation, these companies benefit from solving innovative problems and adopting new business models.

Table 6.7 Innovation Communication of EdTech Startup Ecosystem-Industry Level: Government Sector

Industry	United States	China	India
Government Sector	In the United States, the government has undertaken various initiatives to support the growth of the EdTech sector. For instance, policies like the Every Student Succeeds Act (ESSA) emphasize the importance of technology in education and provide funding for the development and implementation of innovative digital tools in K-12 classrooms. The U.S. Department of Education has also introduced several programs, including the Small Business Innovation Research (SBIR) program, which grants funding to EdTech startups	In China, the government has played a significant role in promoting the EdTech sector over the past few years. The Chinese government has introduced several initiatives to support EdTech startups, such as the National Education Information Development Plan, which aims to promote the integration of information technology and education. The government has also provided funding and support for the development of innovative EdTech products through various programs,	In India, the government has undertaken various initiatives to promote the growth of the EdTech sector. For example, the Digital India initiative aims to promote the use of technology across different sectors, including education. The government has also introduced several programs to support EdTech startups, such as the Startup India initiative, which provides funding and support for the development of innovative EdTech products.

Industry	United States	China	India
	for research and development of innovative products.	offering grants for the development of innovative EdTech products. Additionally, China's government has established several innovation centers, including Beijing Zhongguancun Science Park and Shanghai Zhangjiang Hi-Tech Park.	

Table 6.8 Innovation Communication of EdTech Startup Ecosystem-Industry Level: University Sector

Industry	United States	China	India
University Sector	In the United States, several universities have established innovation centers and startup accelerators to support EdTech startups. For example, Stanford University has introduced the Stanford Center for Innovations in	In China, universities play a crucial role in the growth of the EdTech industry. For instance, Tsinghua University in Beijing has established Tsinghua x-lab, a startup incubator that provides funding and consulting services for EdTech startups.	In India, universities play a significant role in promoting entrepreneurship in the EdTech sector. The Indian Institutes of Technology (IITs) have established incubation and acceleration centers that provide funding, consultation, and resources to startups.

Industry	United States	China	India
	Learning to promote research and development in educational technology. The University of Pennsylvania has founded the Education Design Studio, an accelerator program that provides funding and support for EdTech startups. Additionally, universities in the Bay Area, such as UC Berkeley and San Francisco State University, collaborate with local EdTech startups to offer consultation, resources, and access to various networks.	Additionally, Fudan University in Shanghai has set up an EdTech incubation center with a focus on startups in artificial intelligence, virtual reality, and education.	For example, IIT Bombay has set up the Society for Innovation and Entrepreneurship (SINE), an incubation center that supports startups in various fields, including EdTech. Additionally, the Indian School of Business (ISB) has introduced the DLabs accelerator program, focusing on startups in the EdTech industry.

Table 6.9 Innovation Communication of EdTech Startup Ecosystem-Industry Level: Risk Capital Sector

Industry	United States	China	India
Risk Capital Sector	In the United States, the role of investors in supporting the EdTech ecosystem is crucial. Investors in the Bay Area, New York, and Boston have contributed to making these cities prominent EdTech hubs by investing in startup companies, providing consultancy services, fostering networking opportunities, and promoting a culture of innovation and entrepreneurship. Venture capital firms such as Learn Capital, Owl Ventures, and Reach Capital have become key players in the EdTech investment landscape, offering funding and support to startups	In China, investors play a crucial role in the growth of the EdTech ecosystem, especially in Beijing and Shanghai. The Chinese government strongly promotes investment in the EdTech industry as part of a broader strategy to encourage innovation and technology development. Investors like Tencent, GGV Capital, and Qiming Venture Partners have made significant investments in EdTech startups in China, providing essential resources and support for business expansion.	In India, investors also play a crucial role in the growth of the EdTech ecosystem, particularly in Bengaluru and New Delhi. EdTech startups in India have received substantial investments from both domestic and international investors. The Indian government strongly supports investment in this sector as part of a comprehensive initiative to promote digital education. They have made significant investments in EdTech startups in India, providing the necessary resources

Industry	United States	China	India
	nationwide.		and support for their success.

6.1.1.3 Organization Level

Table 6.10 Innovation Communication of EdTech Startup Ecosystem-Organization Level: Coursera

Item	Detail
Customer Segments	Students seeking to enhance knowledge and skills in specific fields or industries. / Employers wanting to improve skills for their employees. / Government and other organizations providing educational and training opportunities to the public or their members.
Value Propositions	High-quality and affordable education and training from leading universities and institutions./ Flexibility in learning pace and schedule. / Opportunities for certifications and degrees to enhance employment and career development.
Channels	User-friendly online platform for easy registration and access to various courses. Mobile applications for iOS and Android devices, enabling access to course content anywhere.
Customer Relationships	Self-service platform: designed for users to register in courses without direct assistance. / Community engagement: discussion boards to foster peer interaction and collaborative learning.
Revenue Streams	Course fees from learners opting for certificates or degrees. / Collaborations with organizations and support. / Revenue-sharing agreements with educational institutions and content providers.
Key Resources	Universities and educational institutions providing courses and content for the platform. / Technology companies offering tools and platforms to support online learning. / Companies and organizations

Item	Detail
	supporting courses, providing job opportunities, and collaborating with the platform.
Key Activities	Development and maintenance of the online platform and supporting infrastructure. Partnerships with educational institutions and organizations to source and maintain course content. /Global marketing and promotion of the platform. / Customer support and technical assistance for learners.
Key Partners	Global universities and educational institutions/ Corporate clients / Governments and non-profit organizations
Cost Structure	Technology and infrastructure expenses / Employee salaries and benefits. /Marketing and sales promotion costs. /Administrative and legal expenses.

Table 6.11 Innovation Communication of EdTech Startup Ecosystem-Organization Level: Duolingo

Item	Detail
Customer Segments	Individuals seeking to learn a new language Employers looking to enhance skills or provide skill development for employees Educational institutions wanting to offer language education to students and learners
Value Propositions	Free access to language education and training Enjoyable and interactive learning experiences Personalized lessons and recommendations Certification of language proficiency
Channels	Mainly utilizing websites and mobile apps to reach customers
Customer Relationships	Self-service model, allowing learners to access the platform and courses without direct customer support Customer support and technical assistance provided through the website and social media channels

Item	Detail
Revenue Streams	Advertising displayed on the platform Sale of certificates and preparatory courses Premium membership subscriptions
Key Resources	Online platform / Network of language experts and educational institutions Team of employees / Artificial intelligence algorithms
Key Activities	Development and maintenance of the online platform Collaboration with language experts and educational institutions to curate and maintain course content Global marketing and promotion of the platform to learners Customer support and technical assistance to learners
Key Partners	Language experts developing and maintaining course content Educational institutions for course certification Technology companies for platform maintenance Advertisers supporting the platform
Cost Structure	Technology and infrastructure expenses Employee salaries and benefits Marketing and sales promotion expenses Management and legal expenses

Table 6.12 Innovation Communication of EdTech Startup Ecosystem-Organization Level: Udemy

Item	Detail
Customer Segments	Individual learners seeking to develop their skills or pursue a new interest Businesses seeking to provide training and development opportunities for their employees
Value Propositions	Access to a vast library of courses on a wide range of topics, taught by experts and professionals around the world/ Personalized recommendations and learning paths based on learners' interests and

Item	Detail
	previous enrollments/ Flexible pricing options for courses, with many courses being available for free or at a low cost/ A business solution for organizations to upskill their employees
Channels	Online marketing and advertising to attract learners to the platform / Email and push notifications to promote courses and personalized recommendations to learners/ Partnering with businesses to offer training solutions for their employees
Customer Relationships	Providing customer support to learners and instructors through email, chat, and community forums/ Offering personalized recommendations and learning paths to learners / Providing training and support to businesses using Udemy for their employees
Revenue Streams	Udemy takes a percentage of each course sale made on the platform Udemy for Business offers a subscription-based model
Key Resources	The Udemy platform and technology infrastructure/ The team of employees who develop and maintain the platform and support the community of learners and instructors / The library of courses available on the platform The data and analytics generated from learner behavior and course performance
Key Activities	Providing a platform for course creators to sell their courses Attracting and retaining learners to the platform through marketing and personalized recommendations/ Providing customer support for learners and instructors Developing and maintaining the platform and its features Partnering with businesses to offer training solutions for their employees
Key Partners	Course creators and instructors who provide the courses offered on the platform Payment processors, such as PayPal and Stripe, who handle transactions

Item	Detail
	Content creators and publishers who partner with Udemy to create high-quality courses
Cost Structure	Employee salaries and benefits/ Technology infrastructure and development costs Marketing and advertising expenses / Content creation and licensing costs

Table 6.13 Innovation Communication of EdTech Startup Ecosystem-Organization Level: Yuanfudao

Item	Detail
Customer Segments	K-12 students and parents in China who are seeking online education services such as one-on-one tutoring, homework assistance, and exam preparation.
Value Propositions	Personalized learning experiences using artificial intelligence and machine learning algorithms. It includes real-time online tutoring sessions, on-demand homework help, access to a large educational content library, and features like online Q&A forums and study groups.
Channels	Online channels such as websites and mobile apps to reach customers. Additionally, offline channels include tutoring centers and partnerships with schools.
Customer Relationships	Provide high-quality service and support to users, including personalized recommendations for courses and content, one-on-one tutoring sessions, and online Q&A forums. It also supports collaborative work and community building among users through study groups.
Revenue Streams	Membership fees for premium services. Commissions from transactions on the platform. Fees for one-on-one tutoring sessions.

Item	Detail
Key Resources	Online platform, artificial intelligence and machine learning algorithms for learning, educational content, and a network of tutors and teachers.
Key Activities	Developing and maintaining the platform. Creating educational content. Providing personalized learning experiences. Managing the network of tutors and teachers.
Key Partners	Schools, tutoring centers. content providers to expand its offerings and reach a broader customer base.
Cost Structure	development and maintenance of the platform. licensing and creating educational content. hiring and training tutors and teachers. marketing and advertising costs.

Table 6.14 Innovation Communication of EdTech Startup Ecosystem-Organization Level: Zueyebang

Item	Detail
Customer Segments	K-12 Students in China: Students seeking high-quality educational resources and personalized learning experiences. / Parents Looking to Support their Children's Education. / Educational Institutions and Teachers: Institutions and teachers looking to improve student learning outcomes and elevate the quality of their teaching
Value Propositions	Access to High-Quality Education / Assistance in Homework, One-on-One Tutoring, and Community Access / Tools for Parents/ Use of Technology for Enhanced Learning
Channels	Zuoyebang Online Platform Social Media and Digital Marketing Channels Collaboration with Educational Institutions and Content Providers
Customer	Blend of Automated and Human Interaction

Item	Detail
Relationships	Access to Personalized Tutoring and Individualized Recommendations Customer Support Team Ready to Assist
Revenue Streams	Membership Fees and Platform Transaction Commissions Premium Access Purchases Commission from Educational Product Sales
Key Resources	Proprietary Technology: Driving the platform, including AI and data analysis tools. Large Team of Instructors, Developers, and Support Staff: Working to create and maintain the platform. / Collaboration with Educational Institutions and Content Providers: Ensuring the platform has access to high-quality resources.
Key Activities	Development and Maintenance of Online Platform Creation and Management of High-Quality Educational Content Collaboration with Educational Institutions and Teachers Utilization of AI and Data Analysis Customer Support and Assistance
Key Partners	Educators and Content Providers: Individuals and organizations creating educational content for the platform. / Investors: Those providing essential funding to expand platform accessibility and capabilities. / Technology Partners: Partnerships with technology providers to supply necessary infrastructure and support platform operations.
Cost Structure	Technology and infrastructure expenses / Employee salaries and benefits. /Marketing and sales promotion costs. /Administrative and legal expenses.

Table 6.15 Innovation Communication of EdTech Startup Ecosystem-Organization Level: VIPKID

Item	Detail
Customer Segments	Chinese children aged 4-15 who want to learn English. Parents who seek high-quality English education for their children.
Value Propositions	One-on-one teaching experience with native English-speaking teachers from North America. / Individualized learning plans tailored to the needs of each student. / Engaging curriculum with games, songs, and interactive activities. / Flexible scheduling and lesson planning.
Channels	VIPKid's online platform, including video conferencing and interactive learning tools. Marketing through social media, search engines, and word of mouth. Collaboration with schools and educational companies in China.
Customer Relationships	Personalized communication with parents and students through the online platform. Feedback and progress reports provided to parents after each lesson. Continuous support and guidance from VIPKid's customer service team.
Revenue Streams	Fees charged to students and parents for each lesson. Membership fees for accessing learning materials and additional resources. Commission fees collected from teachers for each lesson taught.
Key Resources	Technology platform, including video conferencing and interactive learning tools. Curriculum development team and education experts. Network of certified teachers in North America who undergo training and certification. Customer service team to assist students and parents.
Key Activities	Development and improvement of curriculum to align with Chinese students' needs.

Item	Detail
	Recruitment, training, and certification of teachers in North America. Marketing and promotion of the platform to potential customers. Continuous support and feedback to students and parents.
Key Partners	Schools and educational companies in China partnering with VIPKid to offer English education. / Payment processing companies to manage transactions and fees. / Cloud hosting and IT service providers to ensure the smooth operation of the platform.
Cost Structure	Salaries and benefits for employees, including curriculum developers, customer service representatives, and IT staff. Marketing and advertising expenses. / Infrastructure costs for technology and maintenance. Compensation for teachers for each lesson taught.

Table 6.16 Innovation Communication of EdTech Startup Ecosystem-Organization Level: BYJU's

Item	Detail
Customer Segments	K-12 students Parents Teachers and schools
Value Propositions	Personalized learning experiences, including video lessons, interactive quizzes, and personalized recommendations. The platform is designed to help students learn at their own pace and improve learning outcomes.
Channels	A mix of online and offline channels to reach customers, including digital advertising, social media, word of mouth, and partnerships with schools and educational organizations.
Customer Relationships	Building long-term relationships with customers by providing high-quality educational content, personalized support, and continuous engagement through social media and other channels.
Revenue Streams	Subscription model, where customers pay monthly or annual fees to access the platform's content and resources.

Item	Detail
Key Resources	Expert team in education, a proprietary technology platform, and collaborations with schools and educational organizations.
Key Activities	Content development and production, marketing and platform promotion, and expanding access through partnerships and collaborations.
Key Partners	Collaborations with schools and educational organizations, as well as strategic partnerships with technology companies and other businesses.
Cost Structure	Expenses related to content development, technology infrastructure, marketing and advertising, and employee salaries and operations.

Table 6.17 Innovation Communication of EdTech Startup Ecosystem-Organization Level: Unacademy

Item	Detail
Customer Segments	Students preparing for competitive exams such as UPSC, SSC, banking exams, and railway exams. The platform also supports students from underprivileged backgrounds through various initiatives.
Value Propositions	Quality education accessible to everyone in India, diverse course offerings in various Indian languages, including live classes, test series, and personalized learning. Creative features like 'Ask a doubt' and 'Crash Courses' for quick problem-solving.
Channels	Website and mobile app for course access. Participation in various marketing activities like advertising campaigns and sales promotion to reach the target audience.
Customer Relationships	Primarily digital interactions through the website and mobile app. Customer support team dedicated to addressing student queries and concerns.
Revenue Streams	Membership fees, test series fees, and advertising revenue. Various subscription plans offering monthly and yearly access to courses and

Item	Detail
	services.
Key Resources	Technology platform, student network, platform management team. Investment in research and development to enhance the learning experience.
Key Activities	Digital platform creation, digital marketing, content creation, live class and test offerings, personalized learning experiences. Participation in marketing campaigns and sales promotion activities.
Key Partners	Students creating content, publishers and authors providing learning materials, technology providers facilitating online course delivery. Partnerships with brands and institutions for promotional activities.
Cost Structure	Technology and infrastructure costs, employee salaries, marketing and advertising expenses, content creation costs. Significant investment in research and development.

Table 6.18 Innovation Communication of EdTech Startup Ecosystem-Organization Level: Vedantu

Item	Detail
Customer Segments	K-12 students seeking live online tutoring and personalized learning experiences. Parents and schools looking for convenient and affordable learning solutions.
Value Propositions	Providing an interactive and personalized learning experience through live online classes, testing, and assigned tasks. Offering flexibility, competitive pricing, and convenience, allowing students to schedule classes and choose from a diverse range of courses and programs.
Channels	Primary digital channels include the website and mobile app for customer access. Utilizing social media, search engine marketing, and business partnerships to attract new customers.

Item	Detail
Customer Relationships	Building relationships through personalized learning experiences and excellent customer support. Using chatbots, email support, and telephone communication to address customer questions and concerns.
Revenue Streams	Collecting fees from students for live classes, courses, and exam preparation. Offering subscription plans for regular classes and personalized learning programs.
Key Resources	Online platform, WAVE technology, qualified teachers, and customer support team. Collaborating with schools, colleges, and education companies to expand access.
Key Activities	Conducting live online classes, developing personalized learning plans, creating and delivering educational content. Recruiting and training teachers, managing customer relationships, and promoting new courses and programs.
Key Partners	Collaborating with schools, colleges, and education companies to expand access and offer new courses. Partnering with payment gateways and marketing agencies within the group to boost sales.
Cost Structure	Investing in technology development, teacher salaries, marketing and advertising expenses, customer support, and management costs. Leveraging online platforms to reduce overhead costs and provide cost-effective learning solutions.

6.2 Research Discussion

The discussion of documentary analysis and in-depth interviews were summarized and presented in two parts, responding to each research objectives, as follows:

Part 1: The summary of the study of the innovation communication of EdTech startup ecosystem in successful countries.

Part2: The summary of the study of the innovation communication of EdTech startup ecosystem in Thailand.

6.2.1 Part 1: The Summary of the Study of the Innovation Communication of EdTech Startup Ecosystem in Successful Countries

In the context of the country's political landscape, it is found that although all three countries have significantly different political systems, they share a policy direction that supports innovation and prominent entrepreneurs. In the United States, the political landscape is relatively stable, but there are continuous debates on various issues such as internet neutrality and data privacy, which may impact communication innovation in the EdTech startup sector. In China, the government plays a crucial role in controlling and supporting the EdTech startup industry through policies that promote investment and innovation. However, concerns about censorship and state control over data raise potential impacts on communication innovation. In India, the government has shown support for EdTech startups, but challenges exist regarding regulatory frameworks and intellectual property rights that could affect communication innovation in this sector.

In terms of the economy, the United States has the world's largest and stable economy, creating a positive environment for business operations and the growth of the education sector. Schools, colleges, and universities in the U.S. spend billions of dollars each year on education technology, and venture capital firms and other investors in the U.S. help facilitate funding opportunities for EdTech startups. In contrast, China's economic growth, coupled with a rapidly growing middle class, has created a demand for quality education, and the education industry is expected to be

worth over 2 trillion yuan. The Chinese government supports private sector investments in education, leading to a significant number of EdTech startups. However, the Chinese market is highly competitive, and startups often struggle due to a lack of funding, low profits, and intense competition. In India, the rapidly growing economy, along with a large and expanding middle class willing to spend on education, creates opportunities for EdTech startups. However, a significant portion of the population still resides in poverty, posing a challenge for EdTech startups to reach these demographics. The cost of internet and mobile data in India is relatively low, providing an opportunity for EdTech startups to develop mobile-based educational platforms.

In the realm of social and cultural aspects, it is found that the United States is a highly diverse country with people from various ethnicities and cultures. This diversity poses challenges for EdTech startups that need to cater to different learning styles and cultural sensitivities. The use of technology in education is becoming increasingly popular, especially among the younger generation who are more tech-savvy.

In China, the education system places significant emphasis on learning outcomes, and parents are willing to invest heavily in their children's education. This cultural trait has created a significant market for EdTech startups providing supplementary education services, such as tutoring and exam preparation. The younger generation in China has a better understanding of technology and is comfortable using digital devices, presenting opportunities for EdTech startups to develop innovative and interactive learning tools. However, there are concerns that excessive use of technology in education may lead to addiction, social isolation, and other societal issues.

In India, education holds great value in society, and parents are willing to invest in their children's education. However, there is a significant gender gap in literacy rates, posing a challenge for EdTech startups in reaching and engaging with women and girls. India's population is diverse, with multiple languages spoken, presenting a challenge for EdTech startups to develop content that is accessible to all demographics.

Regarding technology, the United States is a global leader with advanced technological infrastructure, creating a conducive environment for the development and growth of EdTech startups. The widespread use of smartphones and the internet in the U.S. provides an opportunity for EdTech startups to introduce their products and services to a large and diverse target audience. However, concerns exist about the quality and trustworthiness of EdTech products due to a lack of expertise and necessary resources among numerous startups.

China is an innovation leader in technology, having invested significantly in artificial intelligence (AI) and emerging technologies. The development of 5G technology and the Internet of Things (IoT) has opened new possibilities for EdTech startups to create realistic and personalized learning experiences. However, there are concerns about the quality and trustworthiness of EdTech products, as many startups lack the expertise and resources required for developing high-quality software and hardware. Additionally, privacy and security concerns in the cyber world are challenges faced by EdTech startups that collect extensive data about students and their learning patterns.

In India, there is a large and rapidly growing internet user base, with an increasing number of smartphone users and a digitally literate workforce. India has a robust IT industry and a skilled community of software developers, presenting an opportunity for EdTech startups to leverage these resources. However, challenges exist regarding the quality of internet connectivity in rural areas, posing a challenge for EdTech startups in accessing these regions.

In the industry dimension, examining the entrepreneur aspect reveals that in the United States, efforts for EdTech startups are concentrated in areas such as San Francisco, New York, and Boston. Each of these regions has developed its unique innovation clusters to support innovation and communication in this sector.

In San Francisco, the birthplace of Silicon Valley, several prominent EdTech startups have emerged in recent years, including Coursera, Udemy, and Edmodo. These companies have leveraged a highly skilled technology workforce and accessed funding to create innovative products and services. Silicon Valley is also the location of various clusters designed to support the growth of EdTech startups in the region,

including incubators and accelerators like Imagine K12 and EdSurge, as well as events such as the ASU+GSV Summit.

New York is another significant hub for EdTech startups in the United States. Companies like Knewton, 2U, and Codecademy stand out in this market. The city benefits from renowned universities and colleges in the area, as well as a thriving media and advertising industry, contributing to effective marketing and communication strategies for EdTech startups. Noteworthy initiatives in New York include the NY EdTech Week conference and support organizations like Socratic Labs and StartEd.

Boston is also a crucial center for EdTech startups, housing companies like edX, Panorama Education, and Ellevation Education. The city has a long history of innovation and entrepreneurship, with prominent institutions such as Harvard and MIT playing significant roles in driving EdTech growth. Initiatives like the LearnLaunch Accelerator, LearnLaunch annual conference, and organizations like the Massachusetts Technology Leadership Council contribute to fostering innovation in various industries.

In China, Beijing and Shanghai have become major hubs for EdTech startups. In Beijing, the Zhongguancun Science Park, often referred to as China's Silicon Valley, is a standout example of an innovation cluster promoting EdTech development. With more than 2,000 high-tech organizations, it provides substantial support from the Chinese government, including infrastructure support and funding. Startups in Beijing benefit from a variety of resources, including consultation projects, incubation services, and networking opportunities.

Shanghai, another vital center for EdTech in China, hosts numerous companies in the Zhangjiang Hi-Tech Park. With over 3,000 high-tech organizations, this innovation park offers extensive resources and support for entrepreneurs, including funding, incubation services, and consultancy programs.

In India, Bengaluru, often referred to as the Silicon Valley of India, is a central hub for technology and EdTech startups. It is home to several prominent EdTech startups such as Byju's, Vedantu, Simplilearn, and Unacademy. Byju's, the most valuable EdTech company in India, has expanded its operations globally and raised over $2.5 billion in funding to date. Delhi, the capital city of India, is another

significant growth center for EdTech, hosting notable startups like Testbook, UpGrad, and Toppr.

The Indian government has initiated several programs to boost the startup ecosystem, including the 'Study in India' project to attract international students to Indian universities, contributing to the significant growth in online learning platforms.

In terms of fostering innovation clusters, Bengaluru hosts accelerators like the Indian School of Business (ISB) and various initiatives, such as the Digital India campaign, aimed at providing digital infrastructure for all citizens. Additionally, the government has introduced the Atal Innovation Mission (AIM), including Atal Tinkering Labs, to promote innovation among students and support EdTech startups.

Overall, these regions and cities serve as dynamic ecosystems, providing support, resources, and networking opportunities for EdTech entrepreneurs, contributing to the growth and innovation in the education technology industry.

The dimension of the government sector reveals a significant role in shaping the EdTech ecosystems, particularly in the United States, China, and India. Specifically, governments play a crucial role in policymaking, providing funding, and supporting the development of innovative communication technology in education.

In the United States, the federal government has initiated various efforts to support the growth of the EdTech sector. Policies such as the Every Student Succeeds Act (ESSA) emphasize the importance of technology in education and allocate funds for the development and implementation of innovative digital tools in K-12 classrooms. Additionally, the U.S. Department of Education has introduced programs like the Small Business Innovation Research (SBIR) initiative, providing funds for innovative EdTech research and development.

Similarly, China's government has played a strong role in promoting the EdTech sector in recent years. The introduction of projects like the National Education Information Development Plan aims to integrate information technology and education. Various government-sponsored programs, including the Innovation and Entrepreneurship Talent Support Program, provide funding for innovative EdTech product development.

In India, the government has implemented initiatives such as the Digital India program to promote the use of technology in different sectors, including education.

Programs like Startup India offer funding and support for innovative EdTech products. State governments, such as Karnataka and Telangana, have also launched their initiatives to support EdTech startups, like the Karnataka Innovation Authority.

In terms of communication technology innovation, the government's role is vital in creating an environment conducive to EdTech startups' development and success. Financial support, policies, and backing from the government can help EdTech startups overcome challenges in developing and scaling innovative communication technology. Government-led initiatives also facilitate connections between EdTech startups and other stakeholders, such as organizations, universities, and venture capital, fostering collaboration and knowledge sharing crucial for the EdTech ecosystem's success.

Moving on to the corporate sector, major companies contribute significantly to the EdTech ecosystems in the United States, China, and India. Companies like Google, Microsoft, and Amazon invest in and acquire EdTech startups, providing them with access to resources such as cloud computing infrastructure, marketing channels, and expertise in various areas like artificial intelligence and machine learning.

In China, businesses such as Tencent, Alibaba, and Baidu have also invested in and acquired EdTech startups, offering financial and technical support. This enables startups to access resources such as financial support and technical expertise, as well as reach a large user base through their platforms.

Similarly, in India, companies like Tata, Reliance, and Infosys have invested in and acquired EdTech startups, facilitating access to resources such as funding, technical support, and expertise in areas like data analysis and cloud computing.

In the realm of communication technology innovation, organizational collaboration is crucial. Organizations in all three countries promote cooperation with EdTech startups through various initiatives, including startup incubation centers, accelerator programs, and joint funding ventures. These initiatives help EdTech startups access resources like funding, consulting, and expertise while allowing organizations to work closely with startups and benefit from their innovative solutions.

In summary, the corporate sector plays a vital role in the EdTech ecosystem by providing startups with access to resources, expertise, and networks crucial for scaling operations and driving innovation. Through genuine collaboration and partnerships with EdTech startups, companies can address innovative challenges and explore new business models.

Risk Capital sector in the United States play a crucial role in supporting the EdTech ecosystem. Investors in the Bay Area, New York, and Boston have contributed significantly to making these cities prominent EdTech hubs. They achieve this by investing in startups, providing consultancy, fostering networking opportunities, and promoting a culture of innovation and entrepreneurship. Companies like Learn Capital, Owl Ventures, and Reach Capital have become key players in EdTech investments, raising funds and supporting startups nationwide.

In China, investors also play a vital role in the growth of the EdTech ecosystem, especially in Beijing and Shanghai. The Chinese government actively promotes EdTech investment as part of its broader strategy to stimulate innovation and technology development. Investors such as Tencent, GGV Capital, and Qiming Venture Partners make substantial investments in EdTech startups in China, providing necessary resources and support for business expansion.

Similarly, in India, investors play a crucial role in the EdTech ecosystem's growth, particularly in Bengaluru and New Delhi. Indian EdTech startups receive significant investments from both domestic and international investors. The Indian government strongly supports investment in this sector, aligning with its broader initiative to promote digital education. Investors like Sequoia Capital, Tiger Global, and Accel Partners make substantial investments in EdTech startups in India, providing the resources and support they need for success.

University sector in the United States have established innovation centers and startup accelerators to support EdTech startups. For example, Stanford University launched the Stanford Center for Education and Innovation to support research and technology development in education. The Graduate School of Education at the University of Pennsylvania founded the Education Design Studio, an accelerator program that provides funding and support for EdTech startups. Additionally, universities in the Bay Area, such as UC Berkeley and San Francisco State

University, collaborate with local EdTech startups, offering consultation, resources, and network access.

In China, universities play a significant role in the growth of the EdTech industry. Tsinghua University in Beijing established Tsinghua x-lab, a startup incubator that provides funding and consulting for EdTech startups. Fudan University in Shanghai has set up an EdTech incubation center focusing on startups in artificial intelligence, virtual reality, and education.

In India, universities actively contribute to fostering entrepreneurship in the EdTech sector. The Indian Institutes of Technology (IITs) have established incubation centers and accelerators that offer funding, consultation, and resources to startups. For example, IIT Bombay created the Society for Innovation and Entrepreneurship (SINE), providing support to startups in various sectors, including EdTech. The Indian School of Business (ISB) introduced the DLabs program, focusing on EdTech startups and offering acceleration support.

These initiatives, along with research collaborations, contribute to improving products and services in the EdTech sector. Universities serve as hubs for talent, enabling successful participation in the growth of EdTech startups. Moreover, universities collaborate with EdTech startups to share research findings, further contributing to innovation in the industry.

In conclusion, the education sector plays a crucial role in supporting the EdTech startup ecosystem in the United States, China, and India. Universities, through the establishment of incubators, accelerators, and research centers, provide essential resources and research support to facilitate the growth of EdTech startups. Additionally, universities act as talent hubs, promoting innovation and entrepreneurship in the EdTech industry.

Organization Level: In the case of educational startups from the United States, such as Coursera, Duolingo, and Udemy, each exhibits distinctive characteristics but shares a common objective—to innovate online learning for individuals worldwide.

Coursera is an online learning platform founded by two computer science professors from Stanford University. It offers courses, specialized expertise, and degrees in various fields, including computer science, business, social sciences, and more. Coursera partners with over 200 universities and organizations globally to

provide learners with access to high-quality education from anywhere, at any time. Coursera's revenue model depends on course fees and membership subscription fees.

Duolingo, created by computer science professors from Carnegie Mellon University, is a language learning platform offering courses in over 40 languages, including English, Spanish, French, German, and Japanese. Duolingo provides a gamified learning experience, making language learning interactive and enjoyable. Duolingo's revenue model relies on course fees, advertisements, and language certification fees.

Udemy is an online learning platform founded by entrepreneurs from Turkey. Udemy offers courses in various subjects, including business, IT, design, and more. Udemy allows instructors to create and publish courses on the platform, providing learners with diverse topics. Udemy's revenue model is based on course fees and membership subscription fees.

Regarding communication strategies, each of these educational startups has developed unique approaches to efficiently reach their target audiences:

Coursera focuses on creating engaging content and providing information to attract and retain learners. It uses email marketing to keep learners informed about the latest courses, offers, and special expertise. Additionally, Coursera's website and mobile app offer a personalized learning experience, suggesting courses based on interests and past enrollments. Coursera also aims to collaborate with universities and organizations worldwide to continuously expand its offerings.

Duolingo's communication strategy centers around gaming and social media. Duolingo uses gamification to make language learning fun and participatory, leveraging elements like points, levels, and virtual coins. The platform also utilizes social media platforms such as Twitter, Instagram, and Facebook to connect with learners and provide updates on the latest features and language courses. Duolingo further offers language certifications as an incentive for learners to continue using the platform.

Udemy emphasizes building a robust community of instructors. It enables instructors to create and publish courses, providing tools and resources to ensure the creation of high-quality courses. Udemy also offers marketing support for instructors

to promote their courses to learners. Additionally, Udemy supports instructors to instill confidence in the quality of courses and learner satisfaction.

In summary, Coursera, Duolingo, and Udemy are educational startups that, while distinct in their characteristics, share a common goal of innovating online learning. Each employs tailored communication strategies to effectively reach and engage their target audiences. Coursera focuses on content creation and global collaborations, Duolingo utilizes gamification and social media, and Udemy prioritizes building a strong instructor community and providing marketing support.

Case Studies from China: Yuandufao, Zuoyebang, and VIPKID. Each has a unique communication strategy. Yuandufao is an online education platform focusing on providing K-12 students with a personalized learning experience. The platform offers diverse courses, including language learning, science, and mathematics. The company has an experienced team of educators working collaboratively with students to create customizable learning plans. Communication occurs through social media platforms such as WeChat and Weibo. Yuandufao organizes online events and webinars to engage with the audience and share educational resources. Additionally, they publish articles on relevant educational topics and student success.

Zuoyebang is another online education platform in China, providing personalized learning experiences for K-12 students. The platform offers courses in various subjects such as mathematics, science, and English. The company's team of experienced educators collaborates with students to create customizable learning plans. Communication involves email marketing to communicate with users and provide personalized course recommendations.

VIPKID is an online English language learning platform connecting Chinese students with English-speaking teachers globally. The company offers personalized lessons and has a team of experienced educators working with students to develop their language skills. VIPKID uses YouTube to share educational content and promote its platform. Additionally, email marketing is utilized to communicate with users and offer personalized lesson recommendations.

Case Studies from India: BYJU’S, Unacademy, and Vedantu. Each has unique plans and communication strategies. BYJU’S is an Indian edtech company offering online learning programs for students from kindergarten to grade12. The company's

learning app is designed to provide a personalized learning experience through interactive video sessions and tests. BYJU'S also offers guidance for competitive exams such as JEE, NEET, CAT, and IAS. The communication strategy of BYJU'S focuses on creating a personalized learning experience for students. The company has an open communication policy that encourages employees to communicate with management about issues or ideas. Training and development programs are regularly conducted to enhance the skills of employees.BYJU'S conducts marketing campaigns and various activities to attract users and increase brand visibility.

Unacademy is another Indian edtech company providing online courses and coaching for various competitive exams. The company's platform includes live classes, recorded video lessons, and tests for students from diverse backgrounds.Unacademy's communication strategy focuses on building a community of learners who share knowledge and support each other. Webinars and live sessions with experts are organized to engage with users and increase awareness.

Vedantu is another Indian edtech startup offering online tutoring and live classes for students from kindergarten to grade 12. The communication strategy of Vedantu involves providing a personalized learning experience through live interactive sessions with teachers. The platform aims to create an engaging and interactive learning environment.

In summary, these Indian edtech startups have unique communication strategies that revolve around creating personalized learning experiences, building communities of learners, and utilizing various channels such as social media and email marketing to engage with users and provide updates on courses and features.

6.3 Recommendations

6.3.1 Policy Recommendation

1) Foster collective goal-setting and vision development to ensure stakeholders in the environmental system share a common future perspective, leading to systematic communication and actions. This involves the government as policy-makers overseeing education and human development, startup businesses as innovators in education, private and educational sectors as collaborative innovators in

education, and the financial sector as investors. Clearly identify current challenges and opportunities, fostering mutual understanding about the future. Shared goal-setting and vision can enhance effective communication among stakeholders.

2) Promote collaboration by establishing two-way communication, extending beyond data sharing. Stakeholders should be supported to collaborate on projects beneficial to the environmental system. Education startup businesses should engage with universities and educational institutions to create products and services that meet educational sector needs. Public sector organizations and private businesses can provide funding and support for startups, while the financial sector can invest in promising startups. Communication can bring these stakeholders together, promoting collaborative efforts beneficial to the overall environmental system.

3) Develop mutual trust. Trust is crucial for successful collaboration. Stakeholders should be transparent and honest in communication, working to build trust mutually. Create open communication channels, and provide support for stakeholders to express opinions and concerns. Startups should be supported to share both successes and failures with other stakeholders, fostering a culture of openness and collaboration.

6.3.2 Recommendation for Specialized Organizations

1) Education startup businesses should define target customer groups clearly to choose suitable communication strategies. This could include content marketing for businesses or educational institutions to establish leadership images, influencer marketing for students and parents to raise awareness, or hybrid marketing combining traditional and new media to reach a large audience.

2) Stakeholders should communicate successes to the public. Showcase successful projects, organize celebrations and public festivals, release noteworthy news, or officially launch events. All these activities help raise awareness and interest in environmental system improvement, stimulating existing participants and encouraging others to join. Celebrating public successes can create positive perceptions of the environmental system, attracting more stakeholders and resources.

6.3.3 Recommendation for Future Studies

1) Expand the scope of research by conducting a cross-cultural comparative analysis. Explore similar educational startup ecosystems in different cultural contexts to identify common patterns, unique challenges, and successful strategies. This approach will contribute to a more comprehensive understanding of how these initiatives can be adapted and implemented globally.

2) Conduct in-depth qualitative studies involving key stakeholders, such as government policymakers, startup entrepreneurs, educators, and investors. Explore their perceptions, experiences, and challenges in a more detailed manner to gain a nuanced understanding of the dynamics within the educational startup ecosystem. This could provide valuable qualitative data to complement the quantitative findings of the current research.

3) Explore the policy implications of successful EdTech startup ecosystems and contribute to the development of supportive frameworks. Investigate the regulatory environment, funding mechanisms, and policy instruments that facilitate the growth of startups in the education sector. Recommendations derived from such studies can aid policymakers in creating an environment conducive to innovation and collaboration.

4) Explore models of global collaboration between educational startups, institutions, and governments. Investigate how startups can collaborate across borders to address global challenges in education. This study could contribute to the development of frameworks for fostering international partnerships and leveraging collective expertise to enhance educational outcomes worldwide.

5) Establish a framework for continuous monitoring and adaptation within educational startup ecosystems. Investigate mechanisms for startups to assess their strategies continually, adapt to changing educational landscapes, and remain responsive to the evolving needs of students and educators. This approach ensures sustained relevance and impact.

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