

Incubationship – A Systematic Analysis of Recently Announced Super Innovation in Higher Education using SWOC, ABCD, and PESTL Frameworks

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ABSTRACT

Purpose: *This paper's main goal is to illuminate the revolutionary potential of incubationship in higher education and its broader societal ramifications. This study intends to offer an organized and thorough analysis of incubationship programs by utilizing the SWOC, ABCD, and PESTL frameworks. It aims to identify their benefits and disadvantages, strengths and limitations, and the numerous external circumstances that may have an impact on their success. Additionally, this study provides a road map for institutions, governments, and educators to use incubationship to help create a new generation of independent, creative, and entrepreneurial people. In the end, it adds to the continuing discussion about how higher education has changed by highlighting the crucial role that incubatorship plays in educating students for a society that needs adaptation, creativity, and innovation. In the end, it adds to the continuing conversation about how higher education is evolving by highlighting the crucial role that incubator programs play in preparing students for a future that demands flexibility, innovation, and a proactive approach to problem-solving.*

Concept: *A systematic and supervised process called incubationship essentially gives students the tools they need to find, develop, and eventually launch their new businesses. By bridging the gap between academic theory and real-world entrepreneurial skills, this idea gives students a rare chance to obtain actual experience in business planning, market research, and financial management. It's important to note that Incubationship transcends national boundaries and has a global impact since graduates with entrepreneurial aptitude and creative mindsets leave institutions all around the world. In order to meet the changing needs of our linked and complicated society, this idea serves as a dynamic catalyst for fostering the next generation of problem-solvers, innovators, and job creators.*

Methodology: *This is an exploratory research analysis and makes use of our newly developed conceptual model and systematic analysis of it using SWOC, ABCD, and PESTL frameworks by using the information obtained from various sources like scholarly articles and AI-based GPTs.*

Results/Analysis: *The paper analysed and evaluated the new model of experiential learning called "incubationship" to create an entrepreneur at a higher education level by using systematic analysis frameworks SWOC, ABCD, and PESTL.*

Originality/Value: *The paper systematically analysed a super-innovation model in HE called Incubationship to create innovative entrepreneurs through a semester-long project to nurture the business leaders to start their own businesses. These outcome Startups can be called as Monocorns or Multicorns depending on the number of primary students involved in the Incubationship.*

Type of Research: *Research Analysis.*

Keywords: *Academic innovations, Higher Education System (HES), Super-innovations in HE, Incubationship, Monocorn, Multicorn, SWOC analysis, ABCD analysis, PESTL Analysis.*

1. INTRODUCTION :

Ensuring quality learning in higher educational institutions is paramount for preparing students to thrive in a rapidly evolving global landscape. Quality learning extends beyond the mere transmission of information; it encompasses a holistic approach that engages students, fosters critical thinking, and equips them with the skills and knowledge needed for success in their chosen fields. Several key principles contribute to the promotion of quality learning in higher education [1].

First and foremost, an emphasis on learner-centered education is essential. Quality learning recognizes the diverse needs, backgrounds, and learning styles of students. Instructors should design curricula that cater to individual and collective needs, encourage active participation, and promote self-directed learning. By shifting the focus from teaching to learning, educational institutions can empower students to take ownership of their education, resulting in deeper comprehension and greater motivation to excel [2].

Secondly, fostering a culture of innovation and adaptability is crucial in higher educational institutions. The world is constantly evolving, with new technologies, industries, and challenges emerging regularly. Institutions that prioritize quality learning encourage faculty and students to embrace change and innovation. This includes incorporating emerging technologies into the curriculum, promoting interdisciplinary approaches, and providing opportunities for experiential learning, research, and creative endeavours. In doing so, higher education institutions prepare students not only for current job markets but also for those of the future, where adaptability and creativity are highly valued [3].

Finally, assessment and feedback mechanisms are integral to quality learning. Educational institutions must implement robust assessment strategies that go beyond traditional exams and encourage critical thinking, problem-solving, and the application of knowledge. Regular, constructive feedback to students and faculty allows for continuous improvement. Moreover, transparent and data-driven assessment processes ensure accountability and enable institutions to make evidence-based decisions to enhance the quality of education they provide [4].

Thus, quality learning in higher educational institutions is a multifaceted endeavour that requires a learner-centered approach, a commitment to innovation, and effective assessment and feedback mechanisms. By adhering to these principles, institutions can create an environment that not only imparts knowledge but also fosters the skills, adaptability, and critical thinking abilities necessary for students to excel in a complex and ever-changing world. Quality learning is an investment in the future, equipping individuals with the tools they need to make meaningful contributions to society and their chosen fields of study.

Experiential learning is a dynamic and innovative approach to quality learning in education that has gained significant recognition in higher educational institutions in recent years. It stands in contrast to traditional classroom-based learning and focuses on providing students with hands-on, practical experiences that enhance their understanding and skill development. This educational philosophy recognizes that active engagement with real-world challenges fosters deeper comprehension, critical thinking, and problem-solving abilities among students, preparing them for success in their careers and beyond [5].

One key aspect of experiential learning is its adaptability to a wide range of disciplines and fields of study. Whether in science, engineering, humanities, or the arts, educators are finding creative ways to incorporate experiential elements into their curricula. These may include internships, field studies, project-based learning, and simulations, among others. By immersing students in situations that mimic the complexities of their future professions, experiential learning helps bridge the gap between theory and practice, making education more relevant and meaningful [6].

Furthermore, experiential learning encourages a student-centered approach to education. It empowers learners to take ownership of their education, as they actively participate in shaping their learning experiences. This approach fosters a sense of responsibility and self-motivation among students, ultimately leading to better retention of knowledge and skills. In an era where adaptability and critical thinking are highly valued, experiential learning in higher educational institutions is not merely a trend but a transformative approach that equips students with the tools they need to thrive in an ever-changing world.

Experiential learning encompasses a diverse array of approaches and methods, each tailored to specific educational goals and disciplines within higher educational institutions [7]. Understanding the various

types of experiential learning can help educators and students alike make the most of this powerful educational approach:

(1) Internships and Co-op Programs: Internships and cooperative education (co-op) programs are perhaps the most well-known forms of experiential learning. These opportunities allow students to work in professional settings related to their field of study. Through internships and co-op experiences, students gain practical skills, build industry connections, and often receive academic credit while working in real-world environments.

(2) Service Learning: Service learning combines community service with academic study. Students engage in volunteer work that directly relates to their coursework, providing them with hands-on experiences while addressing real community needs. This type of experiential learning not only fosters civic engagement but also reinforces the application of classroom knowledge to real-world challenges.

(3) Field Studies and Research Projects: In fields like environmental science, geography, and anthropology, field studies are essential components of experiential learning. Students conduct research or gather data in natural or cultural settings, applying theoretical concepts to practical investigations. These experiences promote critical thinking and data collection skills.

(4) Simulations and Role-Playing: Simulations and role-playing exercises are used across various disciplines, including business, healthcare, and social sciences. These activities immerse students in scenarios that replicate real-life situations. For instance, business students might participate in a simulated stock market, while medical students engage in clinical simulations. These experiences develop decision-making skills, teamwork, and the ability to handle complex situations.

(5) Study Abroad Programs: Studying abroad provides students with a unique form of experiential learning. It exposes them to different cultures, languages, and educational systems. Living and studying in a foreign country promotes cross-cultural awareness, adaptability, and global perspectives, which are increasingly important in today's interconnected world.

(6) Project-Based Learning: Project-based learning (PBL) is a flexible approach that can be applied across various disciplines. Students collaborate on projects that require research, problem-solving, and creativity. PBL fosters teamwork, communication skills, and the ability to synthesize information, making it a valuable experiential learning tool.

(7) Entrepreneurship and Innovation Challenges: In the business and technology sectors, many educational institutions offer entrepreneurship and innovation challenges. These competitions encourage students to develop and pitch innovative business ideas, fostering creativity, entrepreneurship, and practical business skills.

(8) Apprenticeships: In certain fields, such as trades, apprenticeships are a traditional form of experiential learning. Students work under the guidance of experienced professionals, gaining hands-on experience while honing their craft. This model is particularly effective for skill-based industries.

(9) Outdoor Education: Some institutions incorporate outdoor education programs that take students into natural environments for learning experiences. These programs develop leadership, teamwork, and environmental awareness.

In higher educational institutions, a combination of these experiential learning approaches can create a well-rounded education that prepares students not only with knowledge but also with the practical skills, adaptability, and real-world experience necessary for success in their chosen careers. These various types of experiential learning opportunities empower students to bridge the gap between theory and practice, making education more relevant and impactful.

2. INCUBATIONSHIP – A NEW MODEL IN EXPERIENTIAL LEARNING IN HEI :

Experiential learning consists of many models, which include mainly internships, apprenticeships, learning projects, research projects, Case study development, Fieldwork projects, etc. Recently, our group (Aithal, P. S., et al. (2023). [8]) proposed a new innovative experiential learning model called Incubationship. This model of experiential learning facilitates to creation of innovative startup businesses by nurturing entrepreneurial business leaders from higher education institutions. The paper explains the compelling need for incubationship, recognizing it as a pivotal solution that addresses the shortcomings of traditional higher education systems. The paper illuminates the extraordinary potential of incubationship, the new variation of experiential learning for students, universities, and the global economy. The paper argues that the incubationship is not merely an educational method but it is a dynamic catalyst poised to shape a new generation of forward-thinking, problem-solving, and self-

reliant individuals who will navigate and contribute to a world that is more dynamic, interconnected, and complex than ever before. This exploratory paper uncovered how incubation's innovative approach meets the demands of our evolving society and why it is an indispensable component of the future of higher education (figure 1) [8].



Fig. 1: Features of Incubation [8]

The first scholarly paper on introducing the concept of Incubation as a new experiential learning model to nurture entrepreneurs from higher educational institutions with the title: "Super Innovation in Higher Education by Nurturing Business Leaders through Incubation" proposed five stages of Incubation, providing aspiring students with a roadmap to turn their entrepreneurial dreams into reality (figure 2) [8].

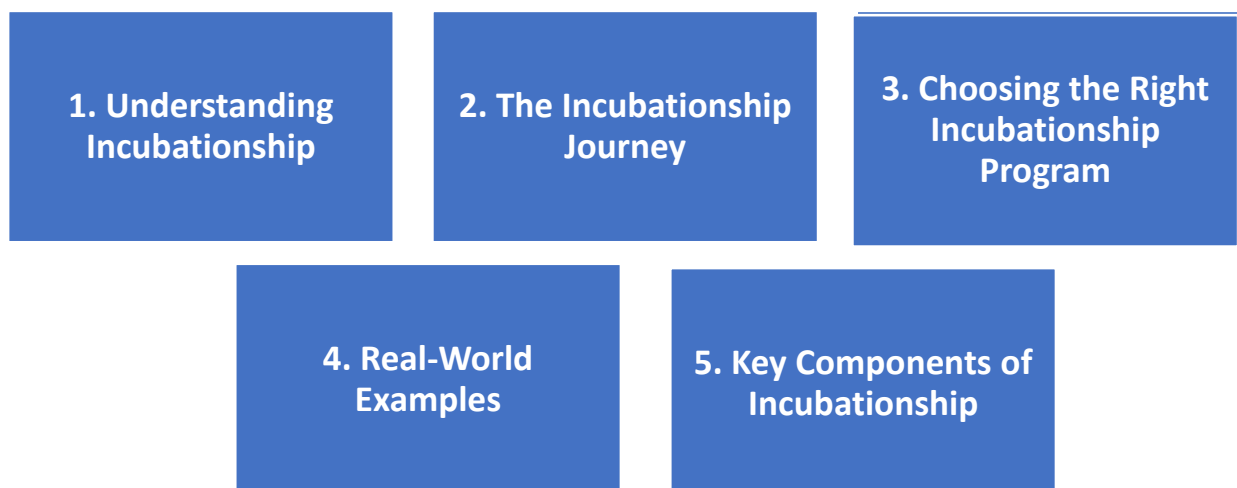


Fig. 2: Five stages of Incubation, providing aspiring students with a roadmap to turn their entrepreneurial dreams into reality [8]

Being a new model proposed [8], it is essential to analyse the model systematically from different angles before using it in higher education institutions. Accordingly, in this paper, the strengths, weaknesses, opportunities, and challenges (SWOC) of the model are analysed and interpreted as internal analysis. Similarly, the advantages, benefits, constraints, and disadvantages (ABCD) of implementing this incubation model in higher education institutions are discussed as stakeholder analysis. Further, the

usefulness of this model is analysed using the external environmental analysis framework by considering political issues, economic issues, social issues, technological issues, and legal issues, (PESTL).

3. REVIEW OF LITERATURE :

3.1 SWOC Analysis Framework

Table 1: Review of literature on SWOC analysis scholarly publications

S. No.	Focus	Reference
1	Applying SWOC analysis to an institution of higher education	Aithal, P. S., & Kumar, P. M. (2015). [9]
2	SWOC analysis of integrating Interprofessional Education into the healthcare curriculum	El-Awaisi, A., et al. (2017). [10]
3	SWOC Analysis of Zomato-A Case of Online Food Delivery Services	Frederick, D. P., & Parappagoudar, S. K. (2021). Frederick, D. P., & Parappagoudar, S. K. (2021).[11]
4	Developing IT enabled mechanism for SWOC analysis: A case study	Shahabadkar, P., Joshi, A., & Nandurkar, K. (2019). [12]
5	A review and SWOC analysis of natural heritage tourism in sub-Saharan Africa	Mutanga, C. N., et al. (2023). [13]
6	SWOC Analysis of Marriott International-A Case Study	Barreto, N., & Mayya, S. (2022). [14]
7	A Study on Marketing Strategies and SWOC Analysis of Himalaya Wellness Private Ltd.	Mayya, S. (2022). [15]
8	Sustainability Study of Green Buildings in India-Through Pestle and SWOC Analysis	Nayak, P., & Kayarkatte, N. (2020). [16]
9	A Study on Marketing Strategies, SWOC Analysis and CSR Activities of HCP Wellness Private Ltd	Mahale, P. (2023). [17]
10	Theory a for optimizing human productivity	Aithal, P. S., & Kumar, P. M. (2016). [18]
11	Student centric learning through planned hard work-an innovative model	Aithal, S., & Aithal, P. S. (2016). [19]
12	Case Study on Certara's Simcyp PBPK Simulator to Eliminate Lengthy Clinical Trials	Aithal, A. et al. (2022). [20]
13	Challenges associated with running a green business in India and other developing countries	Mendon, S., Salins, M., & Aithal, P. S. (2019). [21]
14	Importance of Circular Economy for Resource Optimization in Various Industry Sectors–A Review-based Opportunity Analysis	Aithal, S., & Aithal, P. S. (2023). [22]
15	Super-Intelligent Machines-Analysis of Developmental Challenges and Predicted Negative Consequences	Aithal, P. S. (2023). [23]

3.2 ABCD Analysis Framework:

Table 2: Review of literature on ABCD analysis scholarly publications

S. No.	Focus	Description	Reference
1	ABCD Analysis Proposal	Proposed a new systematic analysis framework to analyse advantages, benefits, constraints, and disadvantages of a system	[24-26]
2	ABCD Listing	Lists advantages, benefits, constraints, and disadvantages of Concepts, ideas, systems, materials, resources, products/ services, strategies, etc	[27-68]

3	ABCD Stakeholders analysis	Identifies advantages, benefits, constraints, and disadvantages of any system from stakeholders point of views	[69-79]
4	ABCD factor and elementary analysis	Identifies affecting factors and constituent elements of issues under four constructs called advantages, benefits, constraints, and disadvantages	[80-85]
5	ABCD Quantitative Analysis	Ranks the four constructs advantages, benefits, constraints, and disadvantages based on quantitative data collected using empirical method	[86-110]

3.3 PESTL Analysis Frameworks:

Table 3: Review of literature on PESTL analysis scholarly publications

S. No.	Focus	Reference
1	Formulation of a systemic PEST analysis for strategic analysis	Ho, J. K. K. (2014). [111]
2	PESTLE analysis on Toyota hybrid vehicles	Tan, J. H., et al. (2012). [112]
3	A critical study on Various Frameworks used to analyse International Business and its Environment	Aithal, P. S. (2017). [113]
4	Strategic Management Models & Indian Epics	Aithal, P. S., & Acharya, R. K. (2016). [114]
5	New Directions in Scholarly Research–Some Fearless Innovations & Predictions for 21st Century Research	Aithal, P. S., & Aithal, S. (2019). [115]
6	A PESTLE analysis of biofuels energy industry in Europe	Achinas, S., et al. (2019). [116]
7	Toward a sustainable decommissioning of offshore platforms in the oil and gas industry: A PESTLE analysis	Capobianco, N., et al. (2021), [117]
8	PESTLE technique—a tool to identify external risks in construction projects	Rastogi, N. I. T. A. N. K., & Trivedi, M. K. (2016). [118]
9	The higher education environment driving academic library strategy: A political, economic, social and technological (PEST) analysis	Cox, J. (2021). [119]
10	The challenges and opportunities for professional societies in higher education in Australasia: A PEST analysis	Doherty, I., Steel, C., & Parrish, D. (2012). [120]
11	Comparison between Retrieval Time of Manual and Electronic Medical Records–A Case Study	Parameshwari, V., et al. (2022). [121]
12	Impact of Mobile Phone Services on the Traditional Telecommunication Services in India	Crasta, L. C., & Shailashri, V. T. (2021). [122]
13	A case study of Cashew Industry in Karnataka	D'Silva, R. J. (2021). [123]

4. OBJECTIVES OF THE PAPER :

- (1) To present an overview of Incubationship as a new experiential learning model to create entrepreneurs.
- (2) To propose “Monocorn” or “Multicorn” (Startup company) as a possible outcome of incubationship.
- (3) To differentiate and compare “Monocorns” with “Unicorns”.
- (4) To analyse Incubationship using SWOC analysis framework.
- (5) To analyse Incubationship using ABCD analysis framework.
- (6) To analyse Incubationship using PESTL analysis framework.
- (7) To evaluate the possible implications and impacts of Incubationship in higher education institutions to fulfil its goal of creating innovative entrepreneurs.

(8) To provide suggestions to stakeholders while incorporating Incubationship as new Experiential learning model in HEIs.

5. RESEARCH METHODOLOGY :

The exploratory research method is used in this analysis. Information were collected using the Google Search and Google Scholar search engines, secondary information about the identified keywords are gathered from published papers. Quasi-secondary information are gathered through the AI-based GPT/BARD. After the literature has been screened and chosen, structured framework for analysis including SWOC, ABCD, and PESTL are used for analysis of Incubationship as a new innovation to identify, support, nurture, and create entrepreneurs to start monocorn or multicorn companies. Interpretation on implications and impact on this new concept of experiential learning are made and presented. Conclusions are drawn based on the analysis, and the entire process is thoroughly documented, ensuring transparency and setting the groundwork for further research investigations.

6. OVERVIEW OF INCUBATIONSHIP AS A NEW EXPERIENTIAL LEARNING MODEL TO CREATE ENTREPRENEURS :

As per the proposed Incubationship as a new variant of experiential learning, a higher education institution or university can offer Incubationship as a long-term project for one semester usually in the final year of Undergraduate or Post Graduate Programme as optional project like internship. A student who opt for Incubationship is called Incubee and a faculty member who guides the team will be called as mentor. The mentor along with other team members like an alumnus, an industry expert, etc, will guide the Incubee to realize the business idea by creating a digital business space (a full stack website with payment integration).

Detailed Stages of Business Startup Using Incubationship Model:

The major stages proposed in figure 2 are further divided into following detailed stages and can be customized based on area, subject, topic, and interest of incubees.

- (1) Business Idea Generation:
- (2) Implementation Plan:
- (3) Creating Digital Space:
- (4) Resource Mobilization:
- (5) Selecting a suitable E-Business Model:
- (6) Selecting a Vendor/ Collaborating with a Business/ Consultancy:
- (7) Operating the digital business through full stack website with payment integration.
- (8) Monitoring and controlling
- (9) Continuous improvement and update.

7. MONOCORN/MULTI-CORN (STARTUP COMPANY) AS A POSSIBLE OUTCOME OF INCUBATIONSHIP :

It is expected that the Incubationship model to be introduced in higher education institutions helps to create innovative entrepreneurs along with a HE institutional nurtured startup company. The startup company initially will have a digital presence through a simple website in the name of Incubee (student who is doing incubationship) to do business of an original proprietary product or service, locally or globally, directly with a product or service, or indirectly as a reseller. An incubationship of four to six months is ideal to come out with a working startup company. Such startups emerging out as outcome of Incubationship can be called as either monocorn, or bicorn, or tricorn or multicorn depending on number of incubees worked as team members.

8. COMPARISON OF “MONOCORN” WITH “UNICORN” :

8.1 Unicorn Company:

In the context of business and finance, a "unicorn" refers to a privately-held startup company that has achieved a valuation of \$1 billion or more. The term "unicorn" is used to describe these companies because they are considered extremely rare, much like the mythical creature after which they are named. Unicorn startups are typically characterized by rapid growth, disruptive business models, and the potential to reshape industries. They often attract significant investment from venture capitalists, private

equity firms, and other investors who see the potential for substantial returns on their investments. Some well-known examples of unicorn companies include Uber, Airbnb, SpaceX, and Palantir Technologies. The concept of unicorns has gained prominence in the technology and startup sectors, but unicorn companies can exist in various industries, including e-commerce, biotechnology, finance, and more. While achieving unicorn status is a significant milestone for a startup, it also comes with high expectations and scrutiny, as investors and the public alike closely watch these companies' progress and growth.

8.2 Monocorn/Multicorn Company:

In the context of business and finance, a “monocorn” or “multicorn” is a newly proposed privately held startup company initiated and managed by one or a few people as owners, respectively. Monocorn/multicorn company emerged as an outcome of an incubationship from a Higher education Institute at undergraduate or post graduate level from an experiential long-term project model called Incubationship with a small initial funding of nearly Rs. 1,000 or \$100 (for Monocorn company) or its multiples (for Multicorn company). The word monocorn is used to represent the single owner of a startup as a result of the outcome of individual incubationship with HE institutional intellectual backup and having a physical or digital product or service in an innovative way with the potentials to grab future global business opportunities. Similarly, the name multicorn represents a multi-owner of a startup as a result of a team-based incubationship with HE institutional intellectual backup and having a physical or digital product or service in an innovative way with the potentials to grab future global business opportunities.

Table 4: Comparison of Unicorn and Monocorn/Multicorn

S. No.	Key Feature	Unicorn Company	Monocorn Company
1	Valuation and Scale	A unicorn company is a privately held startup valued at \$1 billion or more. These companies are known for their substantial scale and growth potential.	A monocorn company, on the other hand, is a newly proposed privately held startup initiated and managed by one or a few individuals as owners. These companies typically start with a much smaller initial funding of around Rs. 1,000 or \$100. They are characterized by a more modest scale, at least initially.
2	Ownership and Management	Unicorn companies can have diverse ownership structures and management teams. They often attract funding from multiple investors and may have larger, more complex teams to manage their operations.	Monocorn companies are typically initiated and managed by one person or a very small group of individuals. The term "monocorn" suggests a single owner or a few owners who are responsible for the startup's vision, strategy, and day-to-day operations.
3	Origins and Funding	Unicorn companies can emerge from a variety of sources and often have access to significant venture capital and funding rounds to support their growth and expansion.	Monocorn companies often originate from higher education institutions as a result of an experiential long-term project model called Incubationship. They start with minimal funding and rely on intellectual support from their educational institutions.
4	Product or Service	Unicorn companies typically offer products or services that have the potential to disrupt industries and capture a	Monocorn companies focus on developing innovative products or services, but their initial scope and market reach may be more limited compared to unicorns. They have

		significant market share on a global scale.	the potential to grow and scale over time.
5	Global Business Opportunities	Unicorn companies are often viewed as having the potential to become major players on the global stage and compete in international markets.	Monocorn companies, while innovative, may start with a narrower focus and may need to gradually expand their reach to seize future global business opportunities.
6	Backup	Unicorns are started by individuals or group of individuals after they graduated and supported by some venture capitalists.	Monocorns are initiated during the incubationship (Usually one semester long) during college studentship and hence backed by a team of experts as mentors.
7	Presence	Very rare. Since only startups which are valued \$ one billion through disruptive innovation can emerge as a unicorn.	Quite often. Since every student in an HEI can opt for incubationship in the final year of UG or PG programme and emerge as a monocorn
8	Initial Stage	A physical company with a digital presence	A digital company with or without a physical presence
9	Business Model	Limited opportunity to use a variety of e-Business models like Manufacturer (Direct), Merchant, etc.	Wide opportunity to use a variety of e-Business models including Brokerage, Advertising, Infomediary, Affiliate, Community, Subscription, Utility, etc. [124]
10	Social Outcome	Creates billionaires and employment for the society	Creates entrepreneurs to solve employment problems of society
11			

9. SWOC ANALYSIS OF INCUBATIONSHIP :

A SWOC analysis, an acronym for Strengths, Weaknesses, Opportunities, and Challenges, is a powerful framework used in strategic planning to evaluate a new model or initiative comprehensively [9-10]. Incubationship is an innovative experiential learning model that is poised to reshape the landscape of education. As the name suggests, this model combines the essence of incubation and research project to create a dynamic learning environment for students across various disciplines to develop an innovative business in the form of startup.

Strengths: Incubationship boasts a plethora of strengths that set it apart from traditional educational approaches. It champions hands-on learning, offering students the opportunity to immerse themselves in real-world projects and challenges. This experiential aspect enables the development of practical skills and critical thinking abilities. Furthermore, Incubationship embraces an interdisciplinary approach, encouraging collaboration among students from diverse academic backgrounds. This fosters creativity and a holistic understanding of complex problems, which are essential skills in today's interconnected world.

Weaknesses: While Incubationship holds immense promise, it does come with its set of challenges. Its resource-intensive nature can be a significant drawback, as it necessitates substantial funding for projects, mentorship, and administrative support. Traditional assessment methods may not adequately capture the learning outcomes of this experiential model, posing a challenge in evaluating student progress effectively. Scaling up Incubationship to accommodate a larger student population or across multiple campuses while maintaining quality can be a complex undertaking.

Opportunities: Incubationship presents a host of exciting opportunities for education. One of its most significant potential benefits is forging partnerships with industries and businesses, providing students with access to real-world projects and experiences. These collaborations can lead to funding, resources, and job opportunities for students, bridging the gap between academia and the professional world. Moreover, the model can leverage digital platforms to reach a global audience, breaking down geographical barriers and allowing students from diverse backgrounds to collaborate and learn together.

Challenges: As with any transformative educational model, Incubationship faces its share of challenges. Resistance to change within the educational establishment can be a formidable obstacle. Traditional institutions and faculty members accustomed to lecture-based approaches may be hesitant to embrace this hands-on, experiential paradigm shift. Additionally, maintaining consistent quality in experiential learning across all instances is a paramount concern. Ensuring that every student receives valuable experiences and mentorship requires rigorous quality assurance mechanisms. Finally, addressing issues of equity and inclusivity is crucial. Overcoming barriers related to access, affordability, and inclusivity is essential to ensure that Incubationship benefits all students, regardless of their socioeconomic status or background.

In conclusion, this introduction sets the stage for a comprehensive SWOC analysis of Incubationship, an experiential learning model that holds the promise of revolutionizing education. While it possesses remarkable strengths and opportunities, it also faces significant challenges and must navigate potential weaknesses. In the subsequent analysis, we will delve deeper into each aspect, providing a holistic understanding of this groundbreaking educational approach. Tables 5 to 8 depicts SWOC analysis for a new experiential learning model called "Incubationship".

Table 5: Strengths of Incubationship as an innovative Experiential learning leading to startup company

S. No.	Key Strengths	Description
1	Hands-On Learning	Incubationship offers a hands-on learning experience where students actively engage in real-world projects and challenges. This experiential approach helps learners develop practical skills, problem-solving abilities, and a deeper understanding of the subject matter.
2	Interdisciplinary Approach	One of the strengths of Incubationship is its interdisciplinary nature. It encourages collaboration between students from diverse academic backgrounds, fostering creativity and a holistic understanding of complex problems.
3	Mentorship and Networking	The model provides students with access to mentors and industry experts, facilitating valuable networking opportunities. This mentorship can lead to internships, job placements, and entrepreneurial ventures, enhancing students' career prospects.
4	Innovation and Entrepreneurship	Incubationship nurtures innovation and entrepreneurship by encouraging students to develop and launch their projects or startups. This aligns with the growing demand for entrepreneurial skills and fosters a culture of innovation.

Table 6: Weaknesses of Incubationship as an innovative Experiential learning leading to startup company

S. No.	Key Strengths	Description
1	Resource Intensive	Implementing Incubationship requires significant resources, including funding for projects, mentorship, and administrative support. Smaller educational institutions or those with limited budgets may struggle to fully adopt this model.
2	Assessment Challenges	Traditional assessment methods may not adequately capture the learning outcomes of experiential models like Incubationship. Developing effective assessment strategies that align with the hands-on nature of the program can be a challenge.
3	Scalability	Expanding Incubationship to accommodate a larger student population or across multiple campuses can be challenging. Maintaining the quality of mentorship and experiential opportunities while scaling up is a persistent concern.

Table 7: Opportunities of Incubationship as an innovative Experiential learning leading to startup company

S. No.	Key Strengths	Description
1	Industry Partnerships	Incubationship can form partnerships with industries and businesses to provide students with real-world projects and experiences. These partnerships can lead to funding, resources, and job opportunities for students.
2	Global Reach	The model has the potential to reach a global audience through online platforms, allowing students from different parts of the world to collaborate and learn together. This can expand the program's impact and diversity.
3	Solution to Unemployment problem	Incubationship based self-business and owning a startup company solves the unemployment problems, both in developing and developed countries.

Table 8: Challenges of Incubationship as an innovative Experiential learning leading to startup company.

S. No.	Key Strengths	Description
1	Resistance to Change	Implementing a new experiential learning model like Incubationship may face resistance from traditional educational institutions and faculty who are accustomed to lecture-based approaches.
2	Quality Assurance	Maintaining consistent quality in experiential learning can be challenging. Ensuring that all students receive valuable experiences and mentorship is crucial for the model's success
3	Equity and Inclusivity	Ensuring that Incubationship is accessible to students from diverse backgrounds and socioeconomic statuses is essential. Overcoming barriers related to access, affordability, and inclusivity is a significant challenge.

In summary, the SWOC analysis of Incubationship reveals its potential to revolutionize education by providing hands-on, interdisciplinary learning experiences that foster innovation and entrepreneurship. However, it also highlights the need for careful resource management, assessment development, and efforts to promote inclusivity and equity in education. To succeed, Incubationship should embrace partnerships, adapt to changing educational landscapes, and address the challenges associated with its implementation.

10. ABCD STAKEHOLDER ANALYSIS OF INCUBATIONSHIP :

As education evolves to meet the demands of an ever-changing world, innovative models like Incubationship emerge to bridge the gap between academia and real-world entrepreneurship. Incubationship, a novel experiential learning model, focuses on identifying innovative business ideas and nurturing students as entrepreneurs to create successful startup ventures. The pursuit of entrepreneurship is a dynamic and transformative journey, and as the entrepreneurial landscape evolves, innovative models for creating entrepreneurs emerge. In this context, the ABCD Analysis framework (proposed and systematically developed by Aithal et al. in 2015 [24-25]), which examines the Advantages, Benefits, Constraints, and Disadvantages, becomes a crucial tool for evaluating and shaping new approaches to entrepreneurship. This structured framework offers a holistic perspective on the strengths and weaknesses of a particular entrepreneurship model, enabling stakeholders, educators, and aspiring entrepreneurs to make informed decisions and navigate the challenges and opportunities inherent to the entrepreneurial process.

Through an ABCD Analysis, one can gain valuable insights into the unique advantages and benefits of a new entrepreneurship model, as well as the constraints and potential disadvantages it may present. This comprehensive understanding paves the way for strategic planning, innovation, and ultimately, the cultivation of a new generation of successful entrepreneurs. To ensure the successful implementation and sustainability of Incubationship, conducting an ABCD Stakeholder Analysis [69], which assesses the Advantages, Benefits, Constraints, and Disadvantages, is imperative. This structured framework provides a comprehensive understanding of the diverse stakeholders involved in Incubationship,

shedding light on their expectations, interests, and potential contributions. By employing this analysis, educational institutions and program administrators can navigate the intricate landscape of stakeholders, fostering collaboration and alignment to maximize the benefits of this innovative approach to learning and entrepreneurship. Tables 9 to 12 depicts advantages, benefits, constrains, and disadvantages of Incubationship from Students point of Views. Tables 13 to 16 depicts advantages, benefits, constrains, and disadvantages of Incubationship from HE Institutes point of Views. Tables 17 to 20 depicts advantages, benefits, constrains, and disadvantages of Incubationship from Society point of Views.

Table 9: Advantages of Incubationship as a new model of experiential learning to create entrepreneurship from students point of views

S. No.	Key Advantages	Description
1	Hands-On Learning	Incubationship provides a unique opportunity for students to apply what they learn in a real-world context. We get to roll up our sleeves and work on actual business ideas, which is far more engaging than traditional classroom learning.
2	Mentorship	Having experienced mentors by our side is like having a safety net as we navigate the complexities of entrepreneurship. They offer insights, share their experiences, and help us avoid common pitfalls.
3	Networking	Incubationship introduces us to a diverse network of like-minded peers, potential co-founders, investors, and industry professionals. These connections are invaluable for our future careers and ventures.
4	Skill Development	Beyond academics, Incubationship equips us with a wide range of practical skills, from market research and financial planning to pitching and negotiation. These skills are immediately transferable to various aspects of life.
5	Reduced Risk	Starting a business is risky, but Incubationship provides a supportive environment where we can make mistakes and learn from them without facing severe consequences. This reduces the fear of failure.
6	Access to Resources	Incubationship opens doors to essential resources such as co-working spaces, funding opportunities, and specialized workshops. These resources are often inaccessible to individual student entrepreneurs.
7	Innovation	Students are encouraged to think outside the box and innovate. It's exciting to see how our ideas can transform into tangible products or services that solve real problems.
8	Self-Discovery	Incubationship is not just about business; it's about self-discovery. We learn about our strengths, weaknesses, and what truly motivates us. It's a journey of personal growth.
9	Entrepreneurial Mindset	Incubationship fosters an entrepreneurial mindset that extends beyond startups. We learn to approach challenges with creativity, adaptability, and a solution-oriented mindset.
10	Job Creation	As Incubees, we have the opportunity to become job creators rather than job seekers. This sense of empowerment is incredibly motivating, knowing that we can contribute to economic growth.
11	Global Perspective	Incubationship encourages us to think globally. We see how our ideas can have an impact not just locally but on a global scale, addressing pressing issues and making a difference.
12	Practical Application	Unlike some theoretical courses, Incubationship allows us to immediately apply what we learn. It's a continuous cycle of learning and doing, which is incredibly fulfilling.
13	Building Resilience	Entrepreneurship is challenging, and Incubationship teaches us resilience. We learn to bounce back from setbacks and keep moving forward, a skill that's valuable in any career.

14	Long-Term Vision	Through Incubationship, we develop a long-term vision for our startups. It's not just about a semester-long project; it's about building something sustainable and impactful.
15	Confidence	As Incubees, we gain confidence in our abilities. We see our ideas take shape and witness our growth as entrepreneurs, which boosts our self-assurance.
16	Impact on Society	Many of us are driven by the desire to create positive change in society. Incubationship empowers us to pursue ventures that align with our values and contribute to meaningful causes.

In summary, Incubationship is an experiential learning model that empowers students to take control of their education and future. It offers a multitude of benefits that extend far beyond the classroom, shaping us into confident, innovative, and forward-thinking individuals prepared to tackle the challenges of a dynamic world.

Some of the benefits of Incubationship from the perspective of students who work as Incubees are listed in table 10.

Table 10: Benefits of Incubationship as a new model of experiential learning to create entrepreneurship from students point of views

S. No.	Key Benefits	Description
1	Real-World Experience	Incubationship immerses us in the real business world from day one. We learn by doing, and this practical experience is incredibly valuable.
2	Innovation Culture	Incubationship fosters a culture of innovation and experimentation. It encourages us to push boundaries and challenge the status quo.
3	Interdisciplinary Learning	The incubees often collaborate with students from diverse backgrounds. This interdisciplinary approach broadens our horizons and exposes us to different perspectives.
4	Flexibility	Incubationship offers flexibility in how we approach our projects. This freedom allows us to tailor our ventures to our unique strengths and passions.
5	Problem-Solving Skills	Entrepreneurship is about solving problems. Incubationship hones our problem-solving skills as we tackle real challenges in the market.
6	Feedback Loop	Incubees constantly receive feedback, not only from mentors but also from potential customers and peers. This iterative feedback loop helps us refine our ideas and strategies.
7	Time Management	Managing a startup alongside academic responsibilities teaches us effective time management, a skill that's crucial in any career.
8	Adaptability	Startups face uncertainty, and Incubationship prepares us to adapt to changing circumstances and pivot when necessary.
9	Exposure to Failure	While no one wants to fail, Incubationship teaches us that failure is a natural part of entrepreneurship. We learn to embrace failure as a stepping stone to success.
10	Ethical Entrepreneurship	Incubees learn the importance of ethical business practices, sustainability, and social responsibility, ensuring our ventures contribute positively to society.
11	Pitching Skills	Pitching to potential investors or partners is a fundamental skill we develop. It's a powerful skill even beyond entrepreneurship, as it helps in selling ideas and projects.
12	Confidence in Communication	Incubee become more confident communicators, whether it's presenting our ideas or negotiating with stakeholders.

13	Market Insights	Through market research, we gain deep insights into consumer behavior and market trends, which can be applied to various industries.
14	Failure Resilience	We develop resilience in the face of setbacks. This resilience is a valuable life skill that helps us bounce back from adversity.
15	Leadership	Many of us take on leadership roles within our startup teams. This experience hones our leadership abilities and our ability to inspire and motivate others.
16	Long-Term Vision	Incubationship encourages us to think long-term and plan for the future. This strategic thinking is applicable not only to startups but also to personal life and career planning.
17	Intrapreneurship	Even if we don't pursue entrepreneurship as a career, the entrepreneurial mindset we develop can be applied within existing organizations as intrapreneurs, driving innovation from within.
18	Crisis Management	Incubees learn to handle crisis situations, a skill that can be beneficial in various aspects of life.
19	Responsible Risk-Taking	Incubationship teaches us to take calculated risks rather than impulsive ones. This measured approach to risk is valuable in decision-making.
20	Global Awareness	As we explore market opportunities, we become more globally aware, understanding the potential of our ventures on a global scale.

In conclusion, Incubationship empowers students to not only become successful entrepreneurs but also well-rounded individuals equipped with a diverse skill set, adaptability, and a strong sense of purpose. These benefits extend far beyond the confines of the classroom, preparing us to thrive in an ever-changing world.

Some of the constraints of Incubationship from the perspective of students who work as Incubees are listed in table 11.

Table 11: Constraints of Incubationship as a new model of experiential learning to create entrepreneurship from students point of views

S. No.	Key Constraints	Description
1	Time Intensive	Incubationship demands a significant amount of time and effort, often requiring students to balance their startup projects with academic coursework. This can lead to burnout and stress.
2	Financial Pressure	Launching a startup can be financially demanding. While some resources may be available through the incubator, students often face personal financial constraints that limit their ability to invest in their ventures.
3	Uncertainty	The startup world is inherently uncertain, and there are no guarantees of success. Students in Incubationships may face anxiety and stress due to the unpredictable nature of entrepreneurship.
4	Resource Availability	The availability of resources such as mentors, co-working spaces, and funding can vary between different incubators and universities. Some students may find themselves in programs with limited resources.
5	Competitive Environment	Incubationships can be highly competitive, with students vying for limited resources and recognition. This competitiveness can create a challenging and sometimes stressful atmosphere.
6	Academic Pressure	Balancing the demands of Incubationship with academic responsibilities can be overwhelming. Students may struggle to excel in both areas simultaneously.

7	Failure Risk	While failure is a part of entrepreneurship, it can be emotionally and mentally taxing. Some students may find it difficult to cope with the possibility of their startups not succeeding.
8	Lack of Industry Experience	Students may lack the industry-specific experience and knowledge required to launch and grow a successful startup. This can pose a significant constraint, especially in highly specialized fields.
9	Team Dynamics	Collaborating with diverse team members can be challenging, and conflicts may arise. Managing team dynamics and ensuring everyone is aligned with the startup's vision can be a constraint.
10	Networking Challenges	Building a professional network can be challenging, particularly for students who are new to the business world. Establishing connections with potential investors, partners, and customers may require extra effort.
11	Market Saturation	Depending on the industry, students may face market saturation or intense competition, making it harder to differentiate their startups.
12	Legal and Regulatory Hurdles	Navigating legal and regulatory requirements for startups can be complex and time-consuming. Compliance issues can be a significant constraint for student entrepreneurs.
13	Mental Health Concerns	The pressures of entrepreneurship, coupled with academic responsibilities, can lead to mental health issues among students. Coping with stress and maintaining mental well-being is a concern.
14	Limited Focus	Some students may become so engrossed in their startups that they miss out on a broader educational experience. They may not explore other areas of interest or take advantage of traditional educational opportunities.
15	Sustainability Challenges	Balancing the pursuit of sustainable and ethical business practices with the need for profitability can be a constraint for student entrepreneurs.
16	Geographical Constraints	The location of the university or incubator can impact the types of startups that can be launched. Access to specific markets, industries, or resources may be limited.
17	Technological Barriers	In tech-oriented startups, students may face technological barriers, especially if they lack access to the latest tools and technologies.
18	Limited Support Post-Graduation	Some Incubation programs may not provide adequate support for students once they graduate. This transition phase can be challenging for budding entrepreneurs.

Despite these constraints, Incubation remains an invaluable experience that equips students with practical skills, resilience, and the potential for long-term success. Overcoming these challenges can be a part of the transformative journey toward becoming successful entrepreneurs.

Some of the disadvantages of Incubation from the perspective of students who work as Incubees are listed in table 12.

Table 12: Disadvantages of Incubation as a new model of experiential learning to create entrepreneurship from students point of views

S. No.	Key Disadvantages	Description
1	Financial Risk	Launching a startup through Incubation can involve financial risk, as students may need to invest their own money or seek external funding. If the venture fails, they may face financial losses.
2	Academic Distractions	Balancing the demands of Incubation with academic coursework can be challenging. Students may find it difficult to excel academically while fully committing to their startup.

3	Pressure to Succeed	There can be significant pressure to make the startup successful, as students may feel that their academic and financial future is at stake. This pressure can lead to stress and anxiety.
4	Limited Focus on Traditional Education	Immersion in Incubationship may result in students neglecting other aspects of their education, missing out on a more traditional college experience.
5	Lack of Work-Life Balance	Launching and running a startup can be all-consuming, leading to a lack of work-life balance. Students may struggle to maintain personal relationships and well-being.
6	Dependency on External Resources	The success of a startup through Incubationship often depends on the availability of external resources such as mentors, funding, and workspace. If these resources are limited, it can hinder progress.
7	Competition	Within an Incubationship program, students are often in direct competition with their peers for resources and recognition. This competitive environment may not be suitable for everyone.
8	No Guaranteed Success	While Incubationship provides valuable support, there is no guarantee of startup success. Students may invest a considerable amount of time and effort only to see their venture fail.
9	Limited Real-World Experience	Despite the practical nature of Incubationship, some students may still feel that they lack real-world experience, especially compared to individuals who have worked in the industry for several years.
10	Difficulty in Finding a Marketable Idea	Not all students may have a viable or marketable business idea. Finding a unique and profitable concept can be a significant challenge.
11	Legal and Regulatory Complexities	Navigating the legal and regulatory aspects of running a business can be complex and overwhelming, particularly for students who lack legal expertise.
12	Networking Challenges	Building a professional network can be difficult for students who are new to entrepreneurship. Establishing connections with potential investors and industry professionals may take time.
13	Emotional Toll of Failure	If a student's startup does not succeed, it can take an emotional toll. Coping with failure and moving forward can be a challenging experience.
14	Inflexibility	Some students may feel that Incubationship programs are inflexible, with rigid timelines and requirements that may not align with their personal circumstances or learning styles.
15	Conflict with Team Members	Collaborating with team members can lead to conflicts and disagreements, affecting the overall dynamics of the startup project.
16	Market Saturation	Depending on the industry, students may face market saturation, making it difficult to gain a foothold in a highly competitive market.
17	Mentor-Student Mismatch	Sometimes, students may not resonate with their assigned mentors, leading to a lack of effective guidance and support.
18	Sustainability Concerns	Balancing profitability with sustainable and ethical business practices can be challenging, especially for students focused solely on achieving financial success.

Despite these disadvantages, Incubationship remains a valuable experiential learning opportunity that can equip students with valuable skills and experiences. Students considering Incubationship should carefully weigh these factors and determine if it aligns with their goals and aspirations.

The various advantages of Incubationship from the perspective of Higher Education Institutions are listed in table 13.

Table 13: Advantages of Incubationship as a new model of experiential learning to create entrepreneurship from HE Institutions point of views

S. No.	Key Advantages	Description
1	Enhanced Relevance of Education	Incubationship aligns higher education with real-world demands by offering students practical experience in entrepreneurship. This relevance makes education more engaging and valuable.
2	Increased Student Enrollment	The presence of Incubationship programs can attract more students to institutions, as it offers a unique and attractive opportunity to pursue entrepreneurial endeavors while pursuing their degrees.
3	Strengthened Reputation	Universities that offer successful Incubationship programs can enhance their reputation as centers of innovation and entrepreneurship, attracting top talent and funding.
4	Industry Collaboration	These programs often involve collaboration with industry experts, entrepreneurs, and businesses. This strengthens ties between academia and industry, fostering innovation and research partnerships.
5	Alumni Engagement	Successful startups emerging from Incubationship programs can contribute financially and professionally to their alma mater, creating a strong network of supportive alumni.
6	Contribution to Local Economy	By incubating startups, institutions can contribute to the local economy by creating jobs, attracting investment, and promoting economic development.
7	Global Recognition	Universities with renowned Incubationship programs gain global recognition and can attract international students and faculty, diversifying their campus community.
8	Research Opportunities	Incubationship programs often lead to research opportunities as students and faculty work on cutting-edge projects, contributing to academic advancement.
9	Increased Funding Opportunities	Universities can access additional funding sources and grants by showcasing successful startups and their impact on the economy and society.
10	Fostering Entrepreneurial Ecosystem	Incubationship programs can act as catalysts for the growth of a local entrepreneurial ecosystem, attracting startups and entrepreneurs to the region.
11	Student Success	The success stories of students who launch startups through Incubationship programs become a source of pride for the institution, motivating other students to excel.
12	Diverse Skill Development	Beyond entrepreneurship, students gain a wide range of skills, including teamwork, problem-solving, project management, and leadership, which are highly transferable.
13	Addressing Unemployment	By encouraging students to create their own jobs, Incubationship programs contribute to reducing graduate unemployment rates.
14	Cultivating Innovation	Universities become hubs of innovation, fostering a culture of creativity and problem-solving among students and faculty.
15	Supporting Regional Development	Incubationship programs can revitalize declining regions by promoting innovation, attracting businesses, and retaining local talent.
16	Interdisciplinary Collaboration	These programs encourage interdisciplinary collaboration, allowing students from various fields to work together on innovative projects.
17	Entrepreneurial Mindset	Incubationship instills an entrepreneurial mindset in students, preparing them to adapt to the rapidly changing job market.

18	Access to Resources	Students benefit from the access to resources like mentorship, funding, co-working spaces, and workshops, which can be challenging to obtain independently.
19	Real-World Problem Solving	Students learn to identify real-world problems and develop practical solutions, making their education more practical and applicable.
20	Networking Opportunities	Universities become networking hubs, connecting students with mentors, investors, and industry leaders, which can be invaluable for their future careers.

These advantages highlight the transformative impact of Incubationship programs on Higher Education Institutions, making them more dynamic, innovative, and responsive to the evolving needs of students and society.

The various benefits of Incubationship from the perspective of Higher Education Institutions are listed in table 14.

Table 14: Benefits of Incubationship as a new model of experiential learning to create entrepreneurship from HE Institutions point of views

S. No.	Key Benefits	Description
1	Fosters Innovation Culture	Fosters Innovation Culture: Incubationship programs create a culture of innovation within the institution, inspiring students and faculty to think creatively and develop groundbreaking solutions.
2	Attraction of Top Talent	Incubationship programs attract high-caliber students and faculty who are drawn to the opportunity to engage in hands-on entrepreneurial experiences.
3	Enhanced Reputation	Institutions offering successful Incubationship programs gain recognition and prestige, drawing attention from prospective students, industry partners, and investors.
4	Industry Collaboration	Collaboration with industry experts and businesses enhances the institution's connections and can lead to research partnerships and funding opportunities.
5	Supports Economic Development	By incubating startups, institutions contribute to local and regional economic development, creating jobs and driving innovation in the community.
6	Global Visibility	Leading Incubationship programs can gain global visibility, attracting international students and faculty, enriching the diversity of the campus community.
7	Research Advancement	Students and faculty involved in Incubationship often engage in research that advances knowledge in entrepreneurship, benefiting the institution's research profile.
8	Alumni Success	The success of startups launched through Incubationship programs reflects positively on the institution, creating a network of successful alumni who contribute back to their alma mater.
9	Cross-Disciplinary Collaboration	Incubationship programs encourage collaboration across different academic disciplines, fostering a holistic approach to entrepreneurship.
10	Promotes Problem-Solving	Students learn to identify real-world problems and develop practical solutions, making their education more relevant and impactful.
11	Flexible Learning	Incubationship offers flexible learning opportunities, allowing students to learn by doing, which can be especially appealing to those who prefer experiential learning.
12	Resource Utilization	Universities can leverage existing resources such as faculty expertise, research facilities, and co-working spaces to support Incubationship initiatives.

13	Diversifies Revenue Streams	Revenue generated from successful startups, partnerships, and grants diversifies the institution's income sources, reducing reliance on tuition fees.
14	Cultivates Leadership Skills	Incubationship helps students develop leadership and decision-making skills by putting them in charge of their startup ventures.
15	Boosts Networking	Institutions become hubs for networking, connecting students with mentors, industry professionals, and potential investors.
16	Promotes Lifelong Learning	The entrepreneurial mindset instilled in students encourages a lifelong commitment to learning and adaptation in an ever-changing world.
17	Reduces Brain Drain	Incubationship programs can help retain local talent by providing opportunities for students to build businesses in their communities.
18	Contributes to Social Good	Some startups emerging from Incubationship programs are focused on social and environmental issues, aligning with universities' missions to address global challenges.
19	Enhances Alumni Engagement	Successful alumni entrepreneurs often engage with their alma mater through mentorship, funding, and knowledge-sharing, enriching the institution's ecosystem.
20	Strengthens Regional Ecosystem	By nurturing startups, institutions contribute to the development of a thriving regional entrepreneurial ecosystem, attracting more businesses and investments.

These benefits demonstrate how Incubationship programs can be transformative for Higher Education Institutions, not only in terms of student development but also in their broader impact on the institution, the local community, and the global entrepreneurial landscape.

The various constraints and challenges of implementing Incubationship programs from the perspective of Higher Education Institutions are listed in table 15.

Table 15: Constraints of Incubationship as a new model of experiential learning to create entrepreneurship from HE Institutions point of views

S. No.	Key Constraints	Description
1	Resource Constraints	Establishing and maintaining Incubationship programs can be resource-intensive. Universities may struggle with budget limitations, especially when it comes to providing necessary facilities, mentorship, and financial support to student startups.
2	Faculty Workload	Faculty members who are involved in mentoring and guiding student entrepreneurs may experience increased workloads, potentially impacting their ability to fulfill their traditional teaching and research responsibilities.
3	Access to Funding	While funding opportunities are a benefit, they can also be a constraint. Not all student startups may secure external funding, leading to financial challenges for both the students and the institution.
4	Student Selection	Selecting the right students for Incubationship programs can be a challenge. Institutions must strike a balance between admitting students based on their potential and ensuring a diverse and inclusive program.
5	Program Scalability	Scaling Incubationship programs to accommodate a growing number of students can be difficult. Ensuring personalized mentorship and support for each student becomes increasingly challenging as the program expands.

6	Alignment with Curriculum	Integrating Incubationship programs into the existing curriculum can be complex. It may require curriculum changes and coordination across different departments and faculties.
7	Risk of Failure	Not all startups launched through Incubationship programs will succeed. Managing students' expectations and providing support in case of failure is essential to prevent discouragement and dropout rates.
8	Intellectual Property Issues	Universities may face intellectual property disputes if students develop products or technologies with commercial potential. Clear policies regarding ownership and rights must be in place.
9	Diversity and Inclusion	Ensuring that Incubationship programs are accessible and welcoming to students from diverse backgrounds, including underrepresented groups, can be challenging.
10	Regulatory and Compliance Hurdles	Navigating legal and regulatory requirements for student-run businesses, especially those involving specialized industries like healthcare or biotechnology, can be time-consuming and complex.
11	Measuring Impact	Determining the success and impact of Incubationship programs can be difficult. Traditional academic metrics may not fully capture the value of experiential learning in entrepreneurship.
12	Competition	As more institutions adopt Incubationship programs, there is increased competition for attracting top entrepreneurial talent, mentors, and investors, making it harder to stand out.
13	Sustainability	Ensuring the long-term sustainability of Incubationship programs can be challenging, as they may depend on external funding sources that can fluctuate over time.
14	Student Expectations	Students entering Incubationship programs may have high expectations of quick success, which may not always align with the reality of building a successful startup, leading to frustration.
15	Mismatched Goals	The goals of students, faculty, and the institution may not always align, leading to conflicts in expectations and outcomes.
16	Limited Entrepreneurial Ecosystem	In regions with limited entrepreneurial ecosystems, finding local mentors, investors, and partners can be difficult, hindering the growth of student startups.
17	Time Constraints	The semester-based nature of higher education can impose time constraints on Incubationship programs, potentially limiting the depth of entrepreneurial experiences students can gain.
18	Cultural Barriers	Encouraging an entrepreneurial mindset within a traditionally academic culture can be challenging, as it may require a cultural shift within the institution.
19	Failure Stigma	Some students may fear the stigma associated with failure in entrepreneurship, potentially deterring them from participating in Incubationship programs.
20	Evaluating Mentor Quality	Ensuring that mentors in the program are of high quality and genuinely committed to student success can be challenging.

These constraints highlight the complex nature of implementing Incubationship programs in higher education and the need for thoughtful planning and continuous adaptation to address these challenges effectively.

There are various disadvantages and challenges associated with Incubationship programs from the perspective of Higher Education Institutions and are listed in Table 16.

Table 16: Disadvantages of Incubationship as a new model of experiential learning to create entrepreneurship from HE Institutions point of views

S. No.	Key Disadvantages	Description
1	Resource Intensiveness	Implementing and maintaining Incubationship programs can be resource-intensive for universities. They require funding for mentorship, co-working spaces, workshops, and other support services.
2	Faculty Commitment	Faculty members who serve as mentors in Incubationship programs may face challenges in balancing their mentoring responsibilities with their traditional teaching and research duties.
3	Uneven Student Interest	Not all students may be interested in entrepreneurship or have viable business ideas, potentially resulting in low participation rates and underutilization of program resources.
4	Risk of Failure	Encouraging students to start businesses can lead to a higher risk of failure, which may affect students' confidence and motivation, as well as the reputation of the institution.
5	Time Constraints	The semester-based structure of higher education may limit the time available for students to fully develop and launch their startups, potentially leading to rushed business decisions.
6	Limited Access to Expertise	In regions with a less developed entrepreneurial ecosystem, universities may struggle to provide students with access to experienced mentors, investors, and industry experts.
7	Intellectual Property Concerns	Incubationship programs can raise complex intellectual property issues if students' business ideas are developed within the university's research or innovation framework.
8	Lack of Alignment with Traditional Education	The focus on practical entrepreneurship skills in Incubationship programs may not align with the traditional academic goals and values of universities, potentially leading to conflicts in institutional culture.
9	Exclusivity	These programs may unintentionally create a divide between students who participate and those who do not, potentially exacerbating inequalities among students.
10	Measuring Success	It can be challenging to define and measure the success of Incubationship programs, as traditional academic metrics may not capture the full impact of entrepreneurship education.
11	Mentorship Quality	Ensuring the quality of mentorship can be a challenge, as not all mentors may possess the necessary skills or commitment to guide students effectively.
12	Overemphasis on Startups	The exclusive focus on launching startups may not align with the career goals of all students, potentially neglecting other valuable career paths.
13	Economic Viability	The pressure to create viable businesses can overshadow the educational aspect of entrepreneurship, leading to a focus on short-term profit rather than long-term learning.
14	Dependence on External Funding	Many Incubationship programs rely on external funding, making them vulnerable to funding fluctuations and potential discontinuation.
15	Cultural Resistance	Shifting the university culture towards a more entrepreneurial mindset can face resistance from faculty, staff, and students who are accustomed to traditional academic approaches.
16	Limited Industry Connections	Universities may struggle to establish strong connections with industries relevant to student startups, hindering opportunities for collaboration and networking.

17	Student Burnout	The intense nature of entrepreneurship can lead to student burnout, affecting their overall well-being and academic performance.
18	Overemphasis on Technology	Some Incubationship programs may disproportionately focus on tech startups, potentially neglecting other sectors and industries.
19	Ethical Considerations	Encouraging entrepreneurship without adequate ethical guidelines can lead to ethical challenges, such as questionable business practices.
20	Market Saturation	In regions with numerous Incubationship programs, there may be an oversaturation of startups competing for limited resources and opportunities.

Balancing the advantages and disadvantages of Incubationship programs is crucial for universities looking to provide valuable entrepreneurial experiences for their students while mitigating potential drawbacks.

There are various advantages of Incubationship programs from society's point of view as listed in Table 17.

Table 17: Advantages of Incubationship as a new model of experiential learning to create entrepreneurship from Society point of views

S. No.	Key Advantages	Description
1	Economic Growth	Incubationship programs contribute to economic growth by fostering the development of new startups and businesses. These startups, when successful, create jobs, generate tax revenue, and stimulate local economies.
2	Reduced Unemployment	By empowering students to become job creators, Incubationship programs help reduce unemployment rates, especially among recent graduates. This shift from job seekers to job creators strengthens the overall job market.
3	Innovation Hub	These programs create a culture of innovation within society by encouraging students to think creatively and develop innovative solutions to real-world problems. This innovation can lead to the development of new products, services, and technologies that benefit society at large.
4	Addressing Social Issues	Incubationship programs often focus on solving pressing social and environmental challenges. Students are encouraged to develop startups that address issues like poverty, healthcare, climate change, and education, leading to positive social impact.
5	Global Competitiveness	A society with a strong entrepreneurial ecosystem and a continuous stream of startups becomes more competitive on a global scale. It attracts international talent and investments, contributing to its global standing.
6	Knowledge Transfer	These programs facilitate knowledge transfer from experienced mentors and industry experts to students. This knowledge transfer enriches society's collective expertise and helps bridge the gap between academia and industry.
7	Community Engagement	Incubationship programs often engage with the local community, fostering collaboration and partnerships between universities and businesses. This engagement strengthens community ties and can lead to mutually beneficial projects.
8	Cultural Shift	By promoting entrepreneurship, these programs can lead to a cultural shift in society's perception of risk-taking and innovation. A society that values entrepreneurship is more likely to support and invest in startups.

9	Role Models	Successful alumni of Incubationship programs can serve as role models for aspiring entrepreneurs, inspiring others to pursue their entrepreneurial dreams. These role models can have a significant influence on future generations.
10	Lifelong Learning	Incubationship programs encourage lifelong learning by providing opportunities for individuals of all ages to explore entrepreneurship. This can lead to a more adaptable and innovative society.
11	Diversity and Inclusion	These programs often prioritize diversity and inclusion, welcoming individuals from various backgrounds and perspectives. This promotes a more inclusive and equitable entrepreneurial ecosystem.
12	Rural Development	Incubationship programs can extend their reach to rural and underserved areas, promoting entrepreneurship and economic development in regions that may otherwise be left behind.
13	Social Integration	They offer a platform for individuals from different social, cultural, and economic backgrounds to come together and collaborate, fostering social integration and cohesion.
14	Startup Ecosystem	Incubationship programs contribute to the overall development of a robust startup ecosystem within society, which includes access to venture capital, accelerators, and support services.
15	Entrepreneurial Mindset	Encouraging an entrepreneurial mindset among individuals benefits society by promoting adaptability, problem-solving skills, and resilience in the face of challenges.
16	Healthcare and Biotechnology Advances	In regions with strong biotechnology and healthcare-focused Incubationship programs, advancements in medical technology and treatments can lead to improved healthcare outcomes for society.

In summary, Incubationship programs bring about positive changes in society by fostering entrepreneurship, innovation, economic growth, and social impact. They play a pivotal role in shaping a dynamic and forward-thinking society that can address the challenges of the future effectively.

There are various benefits of Incubationship programs from society's point of view. These benefits are listed in table 18.

Table 18: Benefits of Incubationship as a new model of experiential learning to create entrepreneurship from Society point of views

S. No.	Key Benefits	Description
1	Entrepreneurship Culture	Incubationship programs cultivate a culture of entrepreneurship within society by encouraging individuals to pursue innovative business ideas. This culture shift promotes creativity, problem-solving, and resilience, which can benefit society as a whole.
2	Job Creation	Startups that emerge from Incubationship programs often create job opportunities, reducing unemployment rates in the community. These new jobs contribute to economic stability and prosperity.
3	Economic Diversification	By nurturing a diverse range of startups, Incubationship programs contribute to economic diversification. A diverse economy is more resilient to economic downturns and less dependent on a single industry.
4	Local Economic Impact	Successful startups often reinvest in the local economy by sourcing goods and services locally. This leads to increased economic activity and growth within the community.
5	Innovation Hub	Incubationship programs establish communities as hubs of innovation, attracting talent, investment, and business opportunities. This reputation can draw in entrepreneurs and investors from other regions, boosting the local economy.

6	Knowledge Sharing	The mentorship and guidance provided in Incubationship programs extend beyond students. This knowledge sharing benefits the broader community by disseminating entrepreneurial expertise and best practices.
7	Inclusive Entrepreneurship	These programs often prioritize inclusivity, fostering entrepreneurship among individuals from diverse backgrounds. This inclusiveness promotes social equity and reduces economic disparities within society.
8	Community Engagement	Incubationship programs engage with the local community, creating opportunities for collaboration and partnership between universities, businesses, and community organizations. This engagement strengthens community ties and leads to mutually beneficial initiatives.
9	Sustainable Solutions	Some Incubationship programs focus on sustainable startups that address environmental and social challenges. This emphasis on sustainability contributes to a more environmentally conscious and responsible society.
10	Global Reputation	A society known for its successful startups and entrepreneurial ecosystem gains a positive global reputation. This can attract international partnerships, investments, and talent, further benefiting the local economy.
11	Knowledge-Based Economy	Incubationship programs contribute to the development of a knowledge-based economy by fostering innovation and entrepreneurship. Such economies are less reliant on traditional industries and more adaptable to change.
12	Reduced Brain Drain	In regions with strong entrepreneurial ecosystems, talented individuals are more likely to stay in the community rather than seeking opportunities elsewhere. This helps retain local talent and expertise.
13	Community Resilience	A thriving entrepreneurial ecosystem enhances a community's resilience in the face of economic challenges. Diverse businesses and startups can help cushion the impact of economic downturns.
14	Healthcare Advancements	Incubationship programs focused on healthcare and biotechnology can lead to advancements in medical research and treatments. This benefits society by improving healthcare outcomes and quality of life.
15	Access to Innovation:	Communities with Incubationship programs have improved access to innovative products and services developed by local startups. This access can lead to improved quality of life and convenience.
16	Talent Retention	These programs help retain talented individuals in the region, preventing brain drain to larger cities. This talent retention bolsters the local workforce and expertise.

In summary, Incubationship programs bring about a wide range of benefits to society, including economic growth, job creation, innovation, and community engagement. They play a pivotal role in shaping vibrant and resilient communities that are well-equipped to address the challenges and opportunities of the future.

There are various constraints of Incubationship programs from society's point of view and are listed in table 19.

Table 19: Constraints of Incubationship as a new model of experiential learning to create entrepreneurship from Society point of views

S. No.	Key Constraints	Description
1	Limited Accessibility	Incubationship programs may not be accessible to all members of society, potentially leaving out individuals who lack the resources or

		opportunities to participate. This can lead to disparities in entrepreneurship opportunities.
2	Resource Allocation	These programs require significant resources, including funding, mentors, and infrastructure. In some cases, this allocation of resources to incubator programs may divert resources from other critical educational needs.
3	Exclusivity	Some Incubationship programs may become exclusive, primarily benefiting students from specific backgrounds or fields of study. This can limit diversity and hinder the development of a well-rounded entrepreneurial ecosystem.
4	Failure Stigma	Society often stigmatizes failure, and incubator programs may not fully address this issue. Students who experience setbacks or business failures may face social pressure, reducing their willingness to take risks.
5	Mismatched Expectations	There may be a disconnect between the expectations set by incubator programs and the realities of entrepreneurship. Students who expect immediate success and financial gain may become disillusioned when faced with the challenges of starting a business.
6	Overemphasis on Profit	While entrepreneurship is often associated with profit, it may not align with the goals of all individuals or benefit all aspects of society. An overemphasis on profit can neglect social and environmental entrepreneurship initiatives.
7	Local Economic Impact Variability	The impact of Incubationship programs on the local economy can vary. Not all startups will succeed, and some may not generate significant economic benefits for the community, leading to disappointment and skepticism.
8	Resource Concentration	Incubator programs can concentrate resources and attention in specific geographic areas, potentially leaving other regions underserved in terms of entrepreneurship support.
9	Dependency on External Funding	Many Incubationship programs rely on external funding sources, which can be volatile. If funding is reduced or withdrawn, it can lead to program cutbacks and reduced support for aspiring entrepreneurs.
10	Intellectual Property Concerns	Encouraging students to develop business ideas within an academic setting can raise intellectual property (IP) concerns. Universities and students may face challenges in defining ownership and rights to developed technologies or products.
11	Short-Term Focus	Incubator programs often have a short-term focus on launching startups, which may not align with the long-term needs of society. Sustaining and growing businesses beyond the incubation phase is equally important.
12	Regulatory Challenges	Entrepreneurship often involves navigating complex regulatory environments. Students and startups emerging from incubator programs may face difficulties in understanding and complying with relevant regulations.
13	Competitive Pressure	As more students participate in Incubationship programs, the competition to secure funding, mentors, and resources can intensify. This increased competition may pose challenges for newcomers.
14	Environmental Impact	The rapid growth and expansion of startups can have negative environmental impacts if sustainability is not a core focus. Unchecked growth can lead to resource consumption and waste.
15	Cultural Resistance	In some societies, there may be cultural resistance to entrepreneurship, particularly for women or certain ethnic groups. Overcoming these cultural barriers can be a constraint for Incubationship programs.

16	Economic Risk	Supporting startups inherently involves economic risk. If a significant number of startups fail, it can have negative economic consequences for investors and the broader community.
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Addressing these constraints requires a balanced and inclusive approach to Incubationship programs. It involves considering the diverse needs and challenges of aspiring entrepreneurs and ensuring that these programs contribute positively to society as a whole.

The various disadvantages of Incubationship programs from society's point of view are listed in Table 20.

Table 20: Disadvantages of Incubationship as a new model of experiential learning to create entrepreneurship from Society point of views

S. No.	Key disadvantages	Description
1	Exclusivity	Incubationship programs may not be accessible to a broad segment of society, potentially favoring those with prior advantages, financial resources, or certain educational backgrounds. This exclusivity can exacerbate inequalities in entrepreneurship opportunities.
2	Resource Allocation	These programs require significant financial and human resources. Universities and educational institutions may allocate substantial funds and faculty time to support incubator programs, diverting resources from other educational priorities.
3	Overemphasis on Entrepreneurship	While entrepreneurship is valuable, an overemphasis on this path may discourage students from pursuing other fields of study and career options that are equally important for society, such as healthcare, education, and public service.
4	Risk of Failure	Encouraging students to launch startups may expose them to financial and personal risks. If their ventures fail, they may face financial burdens and emotional stress, which can impact their overall well-being.
5	Distorted Incentives	The promise of financial success in entrepreneurship can lead students to prioritize monetary gains over societal needs. This might discourage them from pursuing ventures that address critical social and environmental challenges.
6	Short-Term Focus	Incubator programs often have a short-term focus on launching startups. This may lead students to prioritize quick wins and short-term profits over long-term, sustainable solutions to complex societal issues.
7	Inadequate Regulatory Preparedness	Students engaged in entrepreneurship may not have the necessary understanding of legal and ethical responsibilities, potentially leading to regulatory violations and societal harm.
8	Limited Focus on Social Impact	Incubator programs may not place enough emphasis on social entrepreneurship, which addresses social and environmental challenges. This can hinder the development of innovative solutions to pressing societal problems.
9	Dependence on External Funding	Many incubator programs rely on external funding sources, which can be uncertain and may compromise the program's sustainability.
10	Intellectual Property Concerns	Incubator programs may inadvertently promote a culture of intellectual property hoarding, hindering the open sharing of knowledge and innovations for the benefit of society.
11	Distraction from Academics	Students heavily involved in entrepreneurship may struggle to balance their academic commitments, potentially compromising their education.

12	Unrealistic Expectations	Students participating in incubator programs may develop unrealistic expectations about the ease of launching successful startups. This can lead to frustration and disappointment if their ventures encounter difficulties.
13	Economic Disruption	The rapid growth and failure of startups can disrupt local economies, leading to job instability and economic uncertainty in the region.
14	Undermining Traditional Career Paths	Encouraging all students to pursue entrepreneurship may lead to a shortage of talent in traditional career fields, potentially affecting sectors like healthcare, education, and public administration.
15	Cultural Disparities	Some societies may not fully embrace entrepreneurship as a career choice, leading to cultural tensions and misunderstandings.
16		

To address these disadvantages, it is essential for incubator programs to adopt a balanced approach that considers the diverse needs and aspirations of students while also promoting social responsibility, ethical entrepreneurship, and long-term societal impact. Additionally, universities and educational institutions should carefully allocate resources to support a range of educational and career pathways for their students.

11. PESTL ANALYSIS OF INCUBATIONSHIP :

PESTL analysis framework supports the detailed analysis of the implementation of incubationship as an experiential learning model in higher educational institutions under external environments including political environment, Economic environment, Social environment, Technological environment, and Legal environment [111-113].

Implementing Incubationship programs in higher educational institutions can be influenced by various political environments. Table 21 lists some considerations for different political contexts.

Table 21: Political environment to start Incubationship in the Higher Educational Institutions

S. No.	Key Issue	Description
1	Liberal Democracies	Supportive Policy Environment: Liberal democracies often have policies and regulations that encourage entrepreneurship and innovation. Institutions in such environments may find it easier to establish and operate Incubationship programs with government support.
2	Authoritarian States	Government Control: In authoritarian states, higher education institutions may face greater government control and restrictions on curriculum. Implementing Incubationship programs may require close alignment with government objectives and regulations.
3	Federal Systems	Varied Approaches: In countries with federal systems of government, the implementation of Incubationship programs can vary from state to state or province to province. Institutions may need to navigate different regulatory frameworks.
4	Developed Economies	Resource Availability: In economically developed regions, universities may have more resources and access to funding for Incubationship programs. However, they may also face higher competition and cost of living for students.
5	Developing Economies	Resource Constraints: Higher education institutions in developing economies may face resource constraints and a lack of funding. Implementing Incubationship programs may require creative solutions and partnerships with international organizations or businesses.
6	Political Stability	Stable Governance: Political stability is essential for long-term planning and implementation of Incubationship programs. Institutions operating in politically unstable regions may face disruptions and uncertainties.

7	Regulatory Framework	Government Oversight: The degree of government oversight in higher education can vary. Some governments may be actively involved in shaping curriculum and program objectives, while others may have a more hands-off approach.
8	Innovation Policies	National Innovation Strategy: The existence of a national innovation strategy can significantly influence the implementation of Incubationship programs. Governments with robust innovation policies may provide funding and incentives for universities.
9	Public-Private Partnerships	Collaboration Opportunities: The willingness of the government to facilitate public-private partnerships can impact the success of Incubationship programs. Collaboration with private enterprises can provide resources and industry expertise.
10	Globalization	International Collaboration: In politically open environments that embrace globalization, universities may have opportunities to collaborate with foreign institutions and attract a diverse pool of students for Incubationship programs.
11	Education Funding:	Budget Allocation: The government's allocation of funds to higher education can affect the availability of resources for Incubationship programs. Universities may need to advocate for increased funding.
12	Entrepreneurship Policies	Alignment with National Goals: The alignment of Incubationship programs with the government's entrepreneurship and economic development goals can influence their acceptance and support.
13	Intellectual Property Rights	Protection and Ownership: The legal framework for intellectual property rights can impact how universities and students handle innovations and startups developed within Incubationship programs.
14	Student Mobility:	Visa and Immigration Policies: In countries with strict visa and immigration policies, attracting international students to Incubationship programs may be challenging.
15	Local Community Engagement:	Community Support: Building strong ties with the local community and businesses can garner support and resources for Incubationship programs.

It's essential for higher educational institutions to carefully assess the political environment in which they operate and tailor their Incubationship programs to align with the prevailing policies and regulations while also fostering entrepreneurship and innovation among students. Flexibility and adaptability are key in navigating the complexities of different political landscapes.

To successfully start and implement Incubationship programs in higher educational institutions, it's essential to consider various economic environments. These economic factors play a crucial role in shaping the feasibility and effectiveness of such programs. Table 22 depicts a list of economic environments to consider:

Table 22: Economic environment to start Incubationship in the Higher Educational Institutions

S. No.	Key Issue	Description
1	Funding Availability:	Evaluate the availability of financial resources for launching and sustaining Incubationship programs. Secure funding from the institution, government grants, private donors, or corporate sponsorships to ensure program continuity.
2	Economic Development of the Region	Consider the overall economic development of the region where the institution is located. Regions with thriving economies may offer more opportunities for student startups to access customers, investors, and markets.

3	Access to Capital	Assess the accessibility of capital for student startups. Availability of venture capital firms, angel investors, and crowdfunding platforms in the area can significantly impact the success of student-led businesses.
4	Cost of Living	Examine the cost of living in the region, as it can influence students' financial stability and their ability to dedicate time and resources to their startups.
5	Market Demand	Analyze the local and global market demand for products or services that student startups are likely to offer. A strong market can lead to better opportunities for student entrepreneurs.
6	Industry Clusters	Identify industry clusters or sectors that are thriving in the region. Align Incubationship programs with these industries to maximize students' chances of success.
7	Tax Incentives	Explore whether there are any tax incentives or benefits available for startups in the region. These incentives can make it more attractive for students to start their businesses locally.
8	Access to Co-Working Spaces	Consider the availability of affordable co-working spaces for student startups. Accessible co-working spaces can reduce overhead costs and facilitate collaboration among students.
9	Infrastructure and Technology:	Ensure that the region has adequate technological infrastructure, including high-speed internet and access to essential software and tools needed for startups.
10	Economic Stability	Evaluate the overall economic stability of the region. A stable economic environment reduces uncertainties that could impact student startups.
11	Job Market and Employment Opportunities	Assess the job market and employment opportunities available for students after graduation. Highlight how Incubationship programs can empower students to create their jobs if traditional employment opportunities are limited.
12	Return on Investment (ROI)	Calculate the potential ROI for both the institution and students participating in the Incubationship program. Demonstrating a positive economic impact can garner support from stakeholders.
13	Global Economic Trends	Stay informed about global economic trends and their potential influence on startup opportunities and markets. Help students adapt to changing economic conditions.
14	Economic Partnerships	Establish partnerships with local businesses, chambers of commerce, and economic development agencies to leverage their resources and networks for the benefit of student entrepreneurs.
15	Access to Export Markets	Explore opportunities for student startups to access international markets. Global trade agreements and export incentives can facilitate market expansion.
16	Cost-Benefit Analysis	Conduct a cost-benefit analysis of Incubationship programs to assess their economic viability and long-term sustainability.

By taking into account these economic environments, higher educational institutions can create Incubationship programs that are not only academically enriching but also economically advantageous for students and the broader community.

Implementing Incubationship programs in higher educational institutions involves considering the social environment in which these institutions operate. Table 23 depicts various social factors that can influence the successful start and implementation of Incubationship programs:

Table 23: Social environment to start Incubationship in the Higher Educational Institutions

S. No.	Key Issue	Description
1	Student Diversity	Cultural Background: The diversity of student populations can affect the types of business ideas and ventures that emerge within Incubationship

		programs. Institutions with a broad mix of cultures may foster a wider range of innovative concepts.
2	Community Engagement	Local Ecosystem: The level of involvement and support from the local community, including businesses, can greatly impact Incubationship programs. Strong ties with local entrepreneurs and organizations can provide valuable resources and networking opportunities.
3	Student Support Services	Mentorship Availability: The availability of experienced mentors and advisors for students is crucial. Institutions should ensure that mentorship networks are well-established and accessible to all participating students.
4	Entrepreneurial Culture	Promoting Entrepreneurship: The prevalence of an entrepreneurial culture within the institution can inspire students to engage in Incubationship programs. Events, competitions, and seminars on entrepreneurship can contribute to this culture.
5	Gender Inclusivity	Encouraging Diversity: Ensuring that Incubationship programs are inclusive and encourage participation from individuals of all genders is essential for a diverse and innovative entrepreneurial ecosystem.
6	Resource Allocation	Investment in Programs: Adequate funding and resource allocation by the institution for Incubationship programs can significantly impact their success. Resources may include funding for student startups, co-working spaces, and equipment.
7	Technology Access	Digital Infrastructure: Access to technology and digital infrastructure is vital for students to conduct research, develop prototypes, and access online resources relevant to their business ideas.
8	Student Collaboration	Collaborative Spaces: The availability of collaborative spaces within the university can facilitate teamwork among students working on startup projects, enhancing their creative and problem-solving abilities.
9	Market Demand	Local Market Opportunities: The social and economic needs of the local market can influence the types of startups that students choose to pursue within Incubationship programs. Programs should align with local demand.
10	Alumni Engagement	Engaging Graduates: Involving alumni who have successfully launched startups through Incubationship programs can inspire and mentor current students, fostering a sense of community and continuity.
11	Networking Opportunities	Industry Connections: Social events, conferences, and networking opportunities with industry professionals can help students build relationships that are essential for the success of their startups.
12	Student Motivation	Intrinsic Drive: The motivation of students to engage in Incubationship programs can be influenced by social factors such as peer influence, role models, and the perceived value of entrepreneurship in society.
13	Supportive Faculty	Encouraging Educators: Faculty members who are supportive of Incubationship programs and actively engage with students can play a crucial role in encouraging participation and success.
14	Crisis Resilience	Adaptation to Challenges: The ability of Incubationship programs and institutions to adapt to social crises (e.g., pandemics) can impact their continuity and effectiveness.
15	Cultural Perception of Failure	Risk Acceptance: The cultural perception of failure and risk-taking can affect students' willingness to engage in entrepreneurship. Societies that are more accepting of failure as a learning experience may have more resilient entrepreneurs.
16	Community Partnerships	Collaborating with Local Organizations: Collaborating with local businesses, government agencies, and nonprofit organizations can extend the reach and impact of Incubationship programs into the broader community.

17	Ethical Considerations	Social Responsibility: The social and ethical dimensions of student startups should be considered, and programs should encourage responsible and sustainable entrepreneurship.
18	Support for Diverse Industries	Industry Relevance: The social environment should allow for a wide range of industry focus areas within Incubationship programs to cater to diverse student interests and regional economic needs.

Higher educational institutions should take into account these social factors when designing and implementing Incubationship programs to create a conducive environment for student entrepreneurship and innovation. Flexibility and responsiveness to the evolving social context are key to the long-term success of these programs.

Incorporating technological environments into the implementation of Incubationship programs in higher educational institutions can greatly enhance the effectiveness and reach of these programs. Table 24 depicts are various technological factors to consider when starting and implementing Incubationship initiatives:

Table 24: Technological environment to start Incubationship in the Higher Educational Institutions

S. No.	Key Issue	Description
1	Digital Learning Platforms:	Online Resources: Utilize digital learning platforms to provide students with access to a wide range of educational resources, including entrepreneurship courses, webinars, and industry-specific knowledge.
2	Virtual Incubators	Online Collaboration Tools: Create virtual incubators where students can collaborate remotely using tools like video conferencing, project management software, and virtual whiteboards.
3	Artificial Intelligence (AI) and Data Analytics	Market Research: Leverage AI and data analytics to assist students in conducting market research, identifying trends, and making data-driven decisions for their startups.
4	Simulation Software	Business Modeling: Offer simulation software that allows students to simulate various business scenarios, helping them refine their business models and strategies.
5	Prototyping Tools	Digital Prototyping: Provide access to digital prototyping tools, enabling students to create and test product prototypes virtually before moving to physical production.
6	Funding Platforms	Crowdfunding: Encourage students to explore crowdfunding platforms for startup funding, teaching them how to leverage technology for fundraising.
7	Online Mentorship Platforms	Virtual Mentorship: Facilitate virtual mentorship through online platforms, connecting students with experienced entrepreneurs and industry experts from around the world.
8	Blockchain for Intellectual Property	IP Protection: Utilize blockchain technology to help students protect their intellectual property and ideas related to their startups.
9	E-commerce Integration	Online Sales: Teach students how to set up and manage e-commerce platforms for their startups, enabling them to reach a global customer base.
10	Social Media Marketing	Digital Marketing: Provide training in digital marketing and social media strategies, allowing students to effectively promote their startups online.
11	Cloud Computing	Scalability: Encourage students to use cloud computing resources to scale their startups as they grow, ensuring cost-efficiency and flexibility.
12	IoT (Internet of Things)	Product Enhancement: Explore how IoT technology can be integrated into product offerings, enhancing the functionality and marketability of student startups.

13	Big Data Analytics	User Insights: Analyze big data to gain insights into user behavior and preferences, helping students tailor their products and services to meet customer needs.
14	Virtual Reality (VR) and Augmented Reality (AR)	Enhanced Experiences: Explore how VR and AR can be used to create immersive customer experiences or assist in product development and testing.
15	Cybersecurity Training	Data Protection: Ensure that students are well-versed in cybersecurity practices to safeguard their startups against potential threats and data breaches.
16	AI-powered Chatbots	Customer Support: Teach students how to implement AI-powered chatbots for efficient customer support, enhancing user experiences.
17	Online Pitch Competitions	Pitch Practice: Organize online pitch competitions where students can practice presenting their startup ideas to a broader audience, including potential investors.
18	Blockchain for Funding	Tokenization: Explore blockchain-based fundraising options, such as tokenization of assets, for students seeking alternative funding methods.
19	Remote Collaboration Tools	Global Teams: Encourage students to build international teams through remote collaboration tools, leveraging talent from diverse geographical locations.
	AI-driven Market Insights:	Market Prediction: Utilize AI to predict market trends and consumer preferences, helping students make informed decisions about their startup strategies.
	3D Printing	Prototyping: Introduce students to 3D printing technology for rapid prototyping, reducing the time and cost of product development.

By integrating these technological elements into Incubationship programs, higher educational institutions can prepare students to thrive in a technology-driven entrepreneurial landscape and empower them to create innovative, tech-savvy startups.

Implementing Incubationship programs in higher educational institutions requires navigating various legal aspects to ensure compliance and protect the interests of all stakeholders involved. Table 25 contains a list of legal environments to consider when starting and implementing Incubationship initiatives.

Table 25: Legal environment to start Incubationship in the Higher Educational Institutions

S. No.	Key Issue	Description
1	Intellectual Property Rights (IPR)	IP Ownership: Establish clear guidelines on intellectual property ownership, ensuring that students and the institution understand their rights and responsibilities regarding innovations developed during the program.
2	Confidentiality and Non-disclosure Agreements (NDAs)	Protection of Ideas: Encourage the use of NDAs to safeguard students' startup ideas and sensitive information shared with mentors, advisors, and fellow participants.
3	Student Agreements	Program Terms: Develop legal agreements outlining the terms and conditions of participation in the Incubationship program, including rights, responsibilities, and expectations.
4	Contracts with Mentors and Advisors	Responsibilities: Create contractual agreements with mentors and advisors specifying their roles, responsibilities, compensation (if any), and the protection of intellectual property.
5	Funding and Investment Agreements	Investor Rights: Establish legal frameworks for funding rounds and investment agreements, including equity stakes, terms, and conditions for investors supporting student startups.

6	Data Protection and Privacy Laws	Personal Data Handling: Ensure compliance with data protection regulations, such as GDPR or CCPA, when collecting and handling personal data of students, mentors, or program participants.
7	Compliance with Securities Laws	Fundraising Compliance: Understand and adhere to securities laws and regulations when seeking investments or conducting crowdfunding campaigns for student startups.
8	Business Entity Formation	Legal Structure: Assist students in choosing appropriate legal structures (e.g., LLC, corporation) when forming their startups, considering tax implications and liability protection.
9	Employment Laws:	Hiring Practices: Educate students on employment laws and regulations, including fair hiring practices, wage laws, and employment contracts if they hire employees.
10	Contractual Agreements	Vendor Contracts: Draft and review contractual agreements for services and resources provided to the Incubationship program, such as co-working space rentals or software licenses.
11	Ethical Guidelines	Ethical Conduct: Establish ethical guidelines and codes of conduct for students, mentors, and advisors participating in the program to maintain integrity and professionalism.
12	Insurance Coverage	Liability Insurance: Consider obtaining liability insurance to protect the institution and program participants in case of legal claims or disputes.
13	Taxation and Financial Reporting	Tax Compliance: Ensure that financial activities, including funding received and expenditures, are in compliance with tax laws and financial reporting requirements.
14	Dispute Resolution Mechanisms	Conflict Resolution: Define dispute resolution mechanisms, such as mediation or arbitration, to address conflicts that may arise among program participants.
15	Accessibility and Inclusivity	Accessibility Compliance: Ensure that the program and its materials are accessible to all students, including those with disabilities, in compliance with accessibility laws.
16	Compliance with Export Control Laws	Export Restrictions: Educate students on export control laws and regulations if their startups involve the development or distribution of products or technologies subject to export restrictions.
17	Compliance with Anti-discrimination Laws:	Non-discrimination: Ensure that the program complies with anti-discrimination laws, promoting diversity and equal opportunities for all participants.
18	Local and International Regulations	Cross-border Operations: If the program involves international activities, be aware of and comply with relevant international regulations and trade laws.
19	Health and Safety Regulations	Safety Standards: Implement health and safety protocols, especially if the program involves physical spaces, to comply with local safety regulations.
20	Public Funding Compliance:	Government Grants: If the program receives public funding or grants, ensure compliance with the terms and conditions of those funding sources.

By addressing these legal environments, higher educational institutions can create a supportive and legally compliant framework for Incubationship programs, providing students with a secure and transparent entrepreneurial learning experience while protecting the institution's interests.

12. PROPOSITIONS & SUGGESTIONS :

Some further suggestions to start and implement Incubationship programs effectively in higher educational institutions are:

(1) Creating a Supportive Ecosystem:

(a) Establish an ecosystem that fosters innovation and entrepreneurship within the university. This includes creating dedicated spaces for brainstorming, collaboration, and prototyping.

(b) Develop partnerships with local and regional business incubators, accelerators, and industry associations to provide students with access to a broader entrepreneurial network.

(2) Interdisciplinary Collaboration:

(a) Encourage interdisciplinary collaboration among students. Innovation often thrives at the intersection of different fields, so create opportunities for students from various disciplines to work together on entrepreneurial projects.

(b) Offer joint courses or workshops that bring together students from diverse backgrounds to tackle real-world challenges.

(3) Alumni Engagement:

(a) Involve alumni who have successfully launched startups in mentoring current students. They can provide valuable insights, advice, and even funding opportunities.

(b) Organize alumni networking events where former students can connect with aspiring entrepreneurs, fostering a sense of community and continuity.

(4) Access to Funding:

(a) Explore partnerships with venture capital firms, angel investors, and government grants to provide funding opportunities for student startups.

(b) Establish a seed fund or grant program within the university to provide initial capital for promising ventures.

(5) Intellectual Property and Legal Support:

(a) Offer guidance on intellectual property (IP) protection and patent filing for innovative ideas. Ensure that students understand how to safeguard their intellectual assets.

(b) Provide access to legal advisors who can assist with business registrations, contracts, and compliance matters.

(6) Inclusive Approach:

(a) Ensure that incubation programs are inclusive and accessible to a diverse student population, including those from underrepresented backgrounds.

(b) Promote gender diversity in entrepreneurship by actively encouraging and supporting female students in pursuing their startup ideas.

(7) Continuous Evaluation and Improvement:

(a) Regularly evaluate the effectiveness of the incubation program through feedback from students, mentors, and industry partners.

(b) Use data and key performance indicators to track the success of student startups and make improvements based on insights gained.

(8) International Exposure:

(a) Explore opportunities for international collaborations and exchanges in entrepreneurship. Partner with foreign universities or institutions to provide students with a global perspective.

(b) Consider offering overseas internships or startup incubation programs to expose students to different markets and cultures.

(9) Ethical Entrepreneurship:

(a) Emphasize the importance of ethical business practices and social responsibility in entrepreneurship education.

(b) Encourage students to develop startups that address social or environmental challenges, promoting a positive impact on society.

These suggestions can help higher educational institutions develop robust and effective incubation programs that not only nurture entrepreneurial skills but also contribute to the growth and innovation of the wider community. It's essential to adapt these ideas to the specific needs and goals of each institution and regularly assess their impact for continuous improvement.

13. CONCLUSION :

In conclusion, the introduction of incubation programs in higher educational institutions represents a transformative leap into the future of education, entrepreneurship, and innovation. Through careful planning, implementation, and rigorous analysis, these programs bridge the gap between theoretical knowledge and practical skills, enabling students to become self-reliant, forward-thinking, and

problem-solving individuals. The traditional higher education landscape, while essential, often falls short in preparing graduates for the complexities of the modern world. Incubationship serves as a dynamic catalyst for change, fostering a culture of innovation and entrepreneurship within universities. Moreover, mentorship emerges as a powerful component, linking students with industry experts who provide invaluable insights and confidence. Incubationships provide a platform for students to explore their innovative ideas, think creatively, and create groundbreaking solutions, thereby benefitting both individual students and the universities themselves as hubs of creativity. This paradigm shift also cultivates job creators, addressing unemployment and driving economic growth.

Importantly, incubationship programs transcend borders, creating a global impact as entrepreneurial graduates tackle pressing global challenges and contribute to economic development on a global scale. The comprehensive journey of incubationship—from idea generation to scaling and growth—equips students with the necessary tools, skills, and resources for entrepreneurial success. It fosters a supportive environment that minimizes risks associated with startups, all while emphasizing ethical entrepreneurship and social responsibility.

Incorporating SWOC (Strengths, Weaknesses, Opportunities, Challenges) analysis, ABCD (Advantages, Benefits, Constraints, and Disadvantages) analysis, and PESTL (Political, Economic, Social, Technological, Legal,) analysis in the planning and implementation stages ensures a well-rounded understanding of the program's impact and effectiveness. Regular evaluation and adaptation based on data and feedback are key to continuous improvement.

In essence, incubationship in higher educational institutions is not just an educational method; it is a driving force shaping the future generation of innovators and problem solvers. As we embrace this transformative approach, we embark on a journey that has the potential to reshape the landscape of higher education and empower students to thrive in a world that is more interconnected, dynamic, and complex than ever before.

REFERENCES :

- [1] Poole, M., Harman, E., & Deden, A. (1998). Managing the quality of teaching in higher education institutions in the 21st century. *Australian journal of education*, 42(3), 271-284. [Google Scholar↗](#)
- [2] Hénard, F., & Roseveare, D. (2012). Fostering quality teaching in higher education: Policies and practices. *An IMHE guide for higher education institutions*, 1(1), 7-11. [Google Scholar↗](#)
- [3] Cobo, C. (2013). Skills for innovation: Envisioning an education that prepares for the changing world. *Curriculum Journal*, 24(1), 67-85. [Google Scholar↗](#)
- [4] Irons, A., & Elkington, S. (2021). *Enhancing learning through formative assessment and feedback*. Routledge. [Google Scholar↗](#)
- [5] Kolb, D. A. (2014). *Experiential learning: Experience as the source of learning and development*. FT press, pp.20-38. [Google Scholar↗](#)
- [6] Gentry, J. W. (1990). What is experiential learning. *Guide to business gaming and experiential learning*, 9(1), 20-32. [Google Scholar↗](#)
- [7] McCarthy, M. (2010). Experiential learning theory: From theory to practice. *Journal of Business & Economics Research (JBER)*, 8(5). [Google Scholar↗](#)
- [8] Aithal, P. S., & Shubhrajyotsna Aithal (2023). Super Innovation in Higher Education by Nurturing Business Leaders through Incubationship. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 7(3), 142-167. [Google Scholar↗](#)
- [9] Aithal, P. S., & Kumar, P. M. (2015). Applying SWOC analysis to an institution of higher education. *International Journal of Management, IT and Engineering*, 5(7), 231-247. [Google Scholar↗](#)
- [10] El-Awaisi, A., Wilby, K. J., Wilbur, K., El Hajj, M. S., Awaisu, A., & Paravattil, B. (2017). A Middle Eastern journey of integrating Interprofessional Education into the healthcare curriculum: a SWOC analysis. *BMC medical education*, 17(1), 1-10. [Google Scholar↗](#)

- [11] Frederick, D. P., & Parappagoudar, S. K. (2021). SWOC Analysis of Zomato-A Case of Online Food Delivery Services. *International Research Journal of Modernization in Engineering Technology and Science*, 3(3), 537-544. [Google Scholar](#)
- [12] Shahabaddkar, P., Joshi, A., & Nandurkar, K. (2019, February). Developing IT enabled mechanism for SWOC analysis: A case study. In *Proc. of the 2nd International Conference on Manufacturing Excellence (ICMAX-2019)* (pp. 158-164). [Google Scholar](#)
- [13] Mutanga, C. N., Kolawole, O. D., Gondo, R., & Mbaiwa, J. E. (2023). A review and SWOC analysis of natural heritage tourism in sub-Saharan Africa. *Journal of Heritage Tourism*, 1-19. [Google Scholar](#)
- [14] Barreto, N., & Mayya, S. (2022). SWOC Analysis of Marriott International-A Case Study. *International Journal of Case Studies in Business, IT and Education (IJCSBE)*, 6(2), 877-889. [Google Scholar](#)
- [15] Mayya, S. (2022). A Study on Marketing Strategies and SWOC Analysis of Himalaya Wellness Private Ltd. *International Journal of Case Studies in Business, IT and Education (IJCSBE)*, 6(2), 637-654. [Google Scholar](#)
- [16] Nayak, P., & Kayarkatte, N. (2020). Sustainability Study of Green Buildings in India-Through Pestle and Swoc Analysis. *International journal of business management and allied science*, 7(3), 20-30. [Google Scholar](#)
- [17] Mahale, P. (2023). A Study on Marketing Strategies, SWOC Analysis and CSR Activities of HCP Wellness Private Ltd. *International Journal of Case Studies in Business, IT and Education (IJCSBE)*, 7(3), 162-174. [Google Scholar](#)
- [18] Aithal, P. S., & Kumar, P. M. (2016). Theory a for optimizing human productivity. *IRA-International Journal of Management & Social Sciences*, 4(3), 526-535. [Google Scholar](#)
- [19] Aithal, S., & Aithal, P. S. (2016). Student centric learning through planned hard work-an innovative model. *International Journal of Scientific Research and Modern Education (IJSRME)*, 1(1), 886-898. [Google Scholar](#)
- [20] Aithal, A., Aithal, S., & Aithal, P. S. (2022). Case Study on Certara's Simcyp PBPK Simulator to Eliminate Lengthy Clinical Trials. *International Journal of Health Sciences and Pharmacy (IJHSP)*, 6(2), 69-109. [Google Scholar](#)
- [21] Mendon, S., Salins, M., & Aithal, P. S. (2019). Challenges associated with running a green business in India and other developing countries. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 3(1), 35-47. [Google Scholar](#)
- [22] Aithal, S., & Aithal, P. S. (2023). Importance of Circular Economy for Resource Optimization in Various Industry Sectors—A Review-based Opportunity Analysis. *International Journal of Applied Engineering and Management Letters (IAEML)*, 7(2), 191-215. [Google Scholar](#)
- [23] Aithal, P. S. (2023). Super-Intelligent Machines-Analysis of Developmental Challenges and Predicted Negative Consequences. *International Journal of Applied Engineering and Management Letters (IAEML)*, 7(3), 109-141. [Google Scholar](#)
- [24] Aithal, P. S., Shailashree, V., & Kumar, P. M. (2015). A new ABCD technique to analyze business models & concepts. *International Journal of Management, IT and Engineering*, 5(4), 409-423. [Google Scholar](#)
- [25] Aithal, P. S. (2016). Study on ABCD analysis technique for business models, business strategies, operating concepts & business systems. *International Journal in Management and Social Science*, 4(1), 95-115. [Google Scholar](#)
- [26] Aithal, P. S., & Aithal, S. (2023). New Research Models under Exploratory Research Method. *a Book "Emergence and Research in Interdisciplinary Management and Information Technology" edited by PK Paul et al. Published by New Delhi Publishers, New Delhi, India*, 109-140. [Google Scholar](#)

- [27] Aithal, P. S. (2017). ABCD Analysis as Research Methodology in Company Case Studies. *International Journal of Management, Technology, and Social Sciences (IJMTS)*, 2(2), 40-54. [Google Scholar](#)
- [28] Aithal, P. S., Shailashree, V., & Kumar, P. M. (2015). Application of ABCD Analysis Model for Black Ocean Strategy. *International journal of applied research*, 1(10), 331-337. [Google Scholar](#)
- [29] Aithal, A., & Aithal, P. S. (2017). ABCD analysis of task shifting—an optimum alternative solution to professional healthcare personnel shortage. *International Journal of Health Sciences and Pharmacy (IJHSP)*, 1(2), 36-51. [Google Scholar](#)
- [30] Aithal, S., & Aithal, P. S. (2016). ABCD analysis of Dye-doped Polymers for Photonic Applications. *IRA-International Journal of Applied Sciences*, 4(3), 358-378. [Google Scholar](#)
- [31] Raj, K., & Aithal, P. S. (2018). Generating Wealth at the Base of the Pyramid—a Study Using ABCD Analysis Technique. *International Journal of Computational Research and Development (IJCRD)*, 3(1), 68-76. [Google Scholar](#)
- [32] Aithal, P. S., Shailashree, V., & Kumar, P. M. (2016). The study of the new national institutional ranking system using ABCD framework. *International Journal of Current Research and Modern Education (IJCRME)*, 1(1), 389-402. [Google Scholar](#)
- [33] Shenoy, V., & Aithal, P. S. (2016). ABCD Analysis of On-line Campus Placement Model. *IRA-International Journal of Management & Social Sciences*, 5(2), 227-244. [Google Scholar](#)
- [34] Kumari, P., & Aithal, P. S. (2020). Growth & Fate Analysis of Mangalore International Airport—A Case Study. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 4(2), 71-85. [Google Scholar](#)
- [35] Aithal, P. S., & Pai T. V. (2016). Concept of Ideal Software and its Realization Scenarios. *International Journal of Scientific Research and Modern Education (IJSRME)*, 1(1), 826-837. [Google Scholar](#)
- [36] Bhuvana, R., & Aithal, P. S. (2020). Blockchain-based service: A case study on IBM blockchain services & hyperledger fabric. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 4(1), 94-102. [Google Scholar](#)
- [37] Prabhu, G. N., & Aithal, P. S. (2023). Inbound Corporate Social Responsibility Model for Selected Indian Banks and Their Proposed Impact on Attracting and Retaining Customers – A Case Study. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 7(3), 55-74. [Google Scholar](#)
- [38] Panakaje, N. (2023). Educational Loan for Religious Minority Under Arivu Scheme. *International Journal of Case Studies in Business, IT and Education (IJCSBE)*, 7(1), 26-35. [Google Scholar](#)
- [39] Maiya, A. K., & Aithal, P. S., (2023). A Review-based Research Topic Identification on How to Improve the Quality Services of Higher Education Institutions in Academic, Administrative, and Research Areas. *International Journal of Management, Technology, and Social Sciences (IJMTS)*, 8(3), 103-153. [Google Scholar](#)
- [40] Mahesh, K. M., Aithal, P. S. & Sharma, K. R. S., (2023). Impact of Aatmanirbharta (Self-reliance) Agriculture and Sustainable Farming for the 21st Century to Achieve Sustainable Growth. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 7(2), 175-190. [Google Scholar](#)
- [41] Shubhrajyotsna Aithal & P. S. Aithal (2023). Importance of Circular Economy for Resource Optimization in Various Industry Sectors – A Review-based Opportunity Analysis. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 7(2), 191-215. [Google Scholar](#)

- [42] Salins, M., & Aithal, P. S. (2023). Consumers' Intention toward Mitigation of Plate Waste Behaviour in Restaurants – Development of Conceptual Model. *International Journal of Management, Technology, and Social Sciences (IJMITS)*, 8(2), 190-230. [Google Scholar↗](#)
- [43] Aithal, P. S. & Shubhrajyotsna Aithal (May 2023). The Changing Role of Higher Education in the Era of AI-based GPTs. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 7(2), 183-197. [Google Scholar↗](#)
- [44] Nethravathi P. S., & P. S. Aithal (2023). How Internal Quality Assurance System is Re-defined in Private Universities – A Case of Srinivas University, India. *International Journal of Management, Technology, and Social Sciences (IJMITS)*, 8(1), 234-248. [Google Scholar↗](#)
- [45] Kumar, S., Krishna Prasad, K., & Aithal, P. S., (2023). Tech-Business Analytics – a Review based New Model to Improve the Performances of Various Industry Sectors. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 7(1), 67-91. [Google Scholar↗](#)
- [46] Pradeep, M. D., Adithya, K. M., & Aithal, P. S., (2023). Indigenous Distinctive Innovations to Achieve its Vision, Priority and Thrust – A Case Study of Srinivas University. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 7(1), 36-61. [Google Scholar↗](#)
- [47] Aithal, P. S. (2023). Advances and New Research Opportunities in Quantum Computing Technology by Integrating it with Other ICCT Underlying Technologies. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 7(3), 314-358. [Google Scholar↗](#)
- [48] Aithal, P. S., (2023). Super-Intelligent Machines - Analysis of Developmental Challenges and Predicted Negative Consequences. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 7(3), 109-141. [Google Scholar↗](#)
- [49] Kumar, S., & Kunte, R. S. R. (2023). ABCD Analysis of Industries Using High-Performance Computing. *International Journal of Case Studies in Business, IT and Education (IJCSBE)*, 7(2), 448-465. [Google Scholar↗](#)
- [50] Nayana, K., & Manjula, K. T. (2023). Colonialism and Cross-Cultural Ties in Sea of Poppies. *International Journal of Management, Technology and Social Sciences (IJMITS)*, 8(3), 220-228. [Google Scholar↗](#)
- [51] Rameesa, K., & Veeramanju, K. T. (2023). Analysis of Software Industry: Natural Language Processing Approach. *Scope Journal*, 13(02), 743-752. [Google Scholar↗](#)
- [52] Maheswary, B. U., & Lourdusamy, A. (2023). An Evaluation of the Partition Narratives: A Special Focus on Psychological Trauma. *International Journal of Philosophy and Languages (IJPL)*, 2(1), 18-26. [Google Scholar↗](#)
- [53] Aithal, P. S. (2023). Super-Intelligent Machines-Analysis of Developmental Challenges and Predicted Negative Consequences. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 7(3), 109-141. [Google Scholar↗](#)
- [54] Mishra, N., & Aithal, P. S. (2023). Ancient Indian Education: It's Relevance and Importance in the Modern Education System. *International Journal of Case Studies in Business, IT and Education (IJCSBE)*, 7(2), 238-249. [Google Scholar↗](#)
- [55] Naresh Ramdas Kini H., Pai, A. R. (2023). HR Practices of Ultratech Cement Limited: A Case Study. *EPRA International Journal of Multidisciplinary Research (IJMR)*, 9(8), 87-94. [Google Scholar↗](#)
- [56] Nair, S. B., & Aithal, P. S. (2023). Impact of Digital Transformation Marketing Strategies on Homepreneur Business Practices in Kerala. *International Journal of Management, Technology and Social Sciences (IJMITS)*, 8(2), 121-132. [Google Scholar↗](#)
- [57] Nair, S. B., & Aithal, P. S. (2023). An Assessment of Green Marketing Tools and Strategies for Increasing the Consumption Pattern of Khadi Textile Products Among Millennials in Kerala. *International Journal of Management, Technology and Social Sciences (IJMITS)*, 8(3), 340-355. [Google Scholar↗](#)

- [58] Sasi Kumar, A., & Aithal, P. S. (2023). DeepQ Based Heterogeneous Clustering Hybrid Cloud Prediction Using K-Means Algorithm. *International Journal of Management, Technology, and Social Sciences (IJMTS)*, 8(2), 273-283. [Google Scholar](#)
- [59] Asif, N., Aithal, P. S., & Niyaz Panakaje, D. (2023). A Comparison of the Mahila Samman Savings Certificate with Other Small Savings Schemes for the Empowerment of Women in India. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 7(2), 348-359. [Google Scholar](#)
- [60] Jomon Jose, M., & Aithal, P. S. (2023). An Analytical Study of Applications of Artificial Intelligence on Banking Practices. *International Journal of Management, Technology, and Social Sciences (IJMTS)*, 8(2), 133-144. [Google Scholar](#)
- [61] Sasi Kumar, A., & Aithal, P. S. (2023). DeepQ Residue Analysis of Brain Computer Classification and Prediction Using Deep CNN. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 7(2), 144-163. [Google Scholar](#)
- [62] Aithal, P. S., & Aithal, S. (2023). New Research Models under Exploratory Research Method. *a Book "Emergence and Research in Interdisciplinary Management and Information Technology" edited by PK Paul et al. Published by New Delhi Publishers, New Delhi, India*, 109-140. [Google Scholar](#)
- [63] Shetty, V., & Abhishek, N. (2023). Beneficiaries Behavioural Intention Towards Primary Agricultural Co-Operative Credit Society—A Development of Conceptual Model. *International Journal of Case Studies in Business, IT and Education (IJCSBE)*, 7(3), 226-247. [Google Scholar](#)
- [64] Aithal, P. S., Maiya, A. K., Aithal, S., & Pradeep, M. D. (2022). Atomic Research Centres to Intensify Research—An Innovative Approach of Srinivas University, India. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 6(2), 13-35. [Google Scholar](#)
- [65] Parvin, S. R., & Panakaje, N. (2022). A Study on the Prospects and Challenges of Digital Financial Inclusion. *Education (IJCSBE)*, 6(2), 469-480. [Google Scholar](#)
- [66] Rajasekar D., Aithal, P. S. (2022). Direct to Consumer using Livestream as an Innovative Marketing Medium during COVID-19. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 6(1), 77-86. [Google Scholar](#)
- [67] Bharathi, S. C. & Mayya, Suresh Ramana, (2022). Performance Evaluation of Dabur India Ltd through Profitability Ratio Analysis: A Case Study. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 6(1), 387-400. [Google Scholar](#)
- [68] Aithal, P. S., Maiya, A. K., & Pradeep, M. D. (2022). Holistic Integrated Student Development Model & Service Delivery Model—A Best Practice of Srinivas University, India. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 6(1), 590-616. [Google Scholar](#)
- [69] Aithal, P. S., Shailashree, V., & Kumar, P. M. (2016). Application of ABCD Analysis Framework on Private University System in India. *International journal of management sciences and business research*, 5(4), 159-170. [Google Scholar](#)
- [70] Aithal, P. S., Shailashree, V., & Kumar, P. M. (2016). ABCD analysis of Stage Model in Higher Education. *International Journal of Management, IT and Engineering*, 6(1), 11-24. [Google Scholar](#)
- [71] Aithal, P. S. (2021). Analysis of systems & technology using ABCD framework. *Chapter*, 8(1), 345-385. [Google Scholar](#)
- [72] Aithal, P. S., Shailashree, V., & Kumar, P. M. (2016). Analysis of NAAC Accreditation System using ABCD framework. *International Journal of Management, IT and Engineering*, 6(1), 30-44. [Google Scholar](#)
- [73] Aithal, P. S., & Aithal, S., (2023). Stakeholders' Analysis of the Effect of Ubiquitous Education Technologies on Higher Education. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 7(2), 102-133. [Google Scholar](#)

- [74] Aithal, P. S. (2023). How to Create Business Value Through Technological Innovations Using ICCT Underlying Technologies. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 7(2), 232-292. [Google Scholar](#)
- [75] Kumar, Sachin., Krishna Prasad, K., & Aithal, P. S., (30/06/2023). Tech-Business Analytics in Primary Industry Sector. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 7(2), 381-413. ISSN: 2581-6942, [Google Scholar](#)
- [76] Lonappan, J., & Aithal, P. S., (13/08/2023). Journey Towards Entrepreneurship Education-A Qualitative & Quantitative Perspective. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 7(3), 205-225. [Google Scholar](#)
- [77] Jomon Lonappan, Aithal, P. S., & Meera Jacob (2023). E-Professionalism as a Professional Identity in the Digital Era of Medical Education. *International Journal of Health Sciences and Pharmacy (IJHSP)*, 7(2), 35-48. [Google Scholar](#)
- [78] Aithal, P. S., & Aithal, S. (2023). Key Performance Indicators (KPI) for Researchers at Different Levels & Strategies to Achieve it. *International Journal of Management, Technology and Social Sciences (IJMTS)*, 8(3), 294-325. [Google Scholar](#)
- [79] VARSHINI, B. P. (2020). *Study on Factors that Influence Students Perception of a Web Based Recruiting System at the College Level in Coimbatore Region* (Doctoral dissertation, Anna University, Chennai). pp. 24-37. [Google Scholar](#)
- [80] Aithal, P. S., Kumar, P. M., & Shailashree, V. (2016). Factors & elemental analysis of six thinking hats technique using ABCD framework. *International Journal of Advanced Trends in Engineering and Technology (IJATET)*, 1(1), 85-95. [Google Scholar](#)
- [81] Aithal, P. S., & Aithal, S. (2018). Factor & Elemental Analysis of Nanotechnology as Green Technology using ABCD Framework. *International Journal of Management, Technology, and Social Sciences (IJMTS)*, 3(2), 57-72. [Google Scholar](#)
- [82] Aithal, P. S., & Aithal, S. (2017). Factor Analysis based on ABCD Framework on Recently Announced New Research Indices. *International Journal of Management, Technology, and Social Sciences (IJMTS)*, 1(1), 82-94. [Google Scholar](#)
- [83] Aithal, P. S., & Kumar, P. M. (2016). CCE Approach through ABCD Analysis of 'Theory A' on Organizational Performance. *International Journal of Current Research and Modern Education (IJCRME)*, 1(2), 169-185. [Google Scholar](#)
- [84] Aithal, P. S., Shailashree, V., & Kumar, P. M. (2016). Application of ABCD Analysis Framework on Private University System in India. *International journal of management sciences and business research*, 5(4), 159-170. [Google Scholar](#)
- [85] Aithal, P. S., Shailashree, V., & Kumar, P. M. (2016). Analysis of NAAC Accreditation System using ABCD framework. *International Journal of Management, IT and Engineering*, 6(1), 30-44. [Google Scholar](#)
- [86] Shenoy, V., & Aithal, P. S. (2017). Quantitative ABCD Analysis of IEDRA Model of Placement Determination. *International Journal of Case Studies in Business, IT and Education (IJCSBE)*, 1(2), 103-113. [Google Scholar](#)
- [87] Mendon, S., & Aithal, P. S. (2022). Quantitative ABCD Analysis of Organic Food Product and its Impact on Purchase Intention. *International Journal of Management, Technology, and Social Sciences (IJMTS)*, 7(1), 254-278. [Google Scholar](#)
- [88] Kumari, P., & Aithal, P. S. (2022). Stress Coping Mechanisms: A Quantitative ABCD Analysis. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 6(2), 268-291. [Google Scholar](#)
- [89] Prabhu, N., & Aithal, P. S. (2023). Quantitative ABCD Analysis of Green Banking Practices and its Impact on Using Green Banking Products. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 7(1), 28-66. [Google Scholar](#)

- [100] Raj, K., & Aithal, P. S. (2022). Assessing the Attractiveness & Feasibility of doing Business in the BoP Market—A Mixed Method Approach using ABCD Analysis Technique. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 6(2), 117-145. [Google Scholar](#)
- [101] Frederick, D. P., & Salins, M. (2022). Quantitative ABCD Analysis of Online Shopping. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 6(1), 313-329. [Google Scholar](#)
- [102] Nayak, P., & Kayarkatte, N. (2022). Education for Corporate Sustainability Disclosures by Higher Educational Institutions—A Quantitative ABCD Analysis. *International Journal of Management, Technology, and Social Sciences (IJMTS)*, 7(1), 465-483. [Google Scholar](#)
- [103] Nandini Prabhu, G., (2023). Quantitative ABCD Analysis of Integrating Corporate Social Responsibilities with Green Banking Practices by Banks from Customers' Attraction and Retention Perspectives in Selected Indian Banks. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 7(2), 1-37. [Google Scholar](#)
- [104] Madhura, K., & Panakaje, N., (2023). The Power of Social Media on Online Buying Behaviour of the Fashion Products: A Quantitative ABCD Analysis. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 7(3), 90-118. [Google Scholar](#)
- [105] Raghavan, S., & Pai, R. (2023). Quantitative Evaluation of “e-Customer Engagement Strategies” of Millennials for Online Brands, through ABCD Analysis Framework. *International Journal of Management, Technology and Social Sciences (IJMTS)*, 8(1), 159-182. [Google Scholar](#)
- [106] Steevan D'Souza, N., & Varambally, K. V. M. (2023). Value Creation through Corporate Social Responsibility: A Quantitative ABCD Analysis. *International Journal of Management, Technology, and Social Sciences, (IJMTS)*, 8(1), 183-212. [Google Scholar](#)
- [107] Namreen Asif, V. A., & Ramesh Pai (2023). A Quantitative ABCD Analysis of Coffee Industry Stakeholders. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 7(3), 301-340. [Google Scholar](#)
- [108] Amin, V. S., & Kumar, A. (2023). Quantitative ABCD Analysis of In-store Customer Perception Purchase of Home Furniture. *International Journal of Management, Technology and Social Sciences (IJMTS)*, 8(2), 231-253. [Google Scholar](#)
- [109] Santhumayor, F. M. L. (2023). A Quantitative ABCD Analysis on Fostering Emotional Intelligence Among the College Teachers. *EPRA International Journal of Economics, Business and Management Studies (EBMS)*, 10(8), 125-134. [Google Scholar](#)
- [110] Ujwala Kambali, Shailashree, V. T. & Niyaz Panakaje (2023). A Quantitative ABCD Analysis of Agricultural Stakeholders. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 7(3), 379-410. [Google Scholar](#)
- [111] Ho, J. K. K. (2014). Formulation of a systemic PEST analysis for strategic analysis. *European academic research*, 2(5), 6478-6492. [Google Scholar](#)
- [112] Tan, J. H., Chua, W. L., Chow, C. K., Chong, M. C., & Chew, B. C. (2012). PESTLE analysis on Toyota hybrid vehicles. In *Proceedings of the International Conference on Technology Management and Technopreneurship*. 01-09. [Google Scholar](#)
- [113] Aithal, P. S. (2017). A critical study on Various Frameworks used to analyse International Business and its Environment. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 1(2), 78-97. [Google Scholar](#)
- [114] Aithal, P. S., & Acharya, R. K. (2016). Strategic Management Models & Indian Epics. *International Journal of Management Sciences and Business Research*, 5(4), 180-189. [Google Scholar](#)

- [115] Aithal, P. S., & Aithal, S. (2019). New Directions in Scholarly Research–Some Fearless Innovations & Predictions for 21st Century Research. *International Journal of Management, Technology, and Social Sciences (IJMTS)*, 4(1), 1-19. [Google Scholar↗](#)
- [116] Achinas, S., Horjus, J., Achinas, V., & Euverink, G. J. W. (2019). A PESTLE analysis of biofuels energy industry in Europe. *Sustainability*, 11(21), 5981. [Google Scholar↗](#)
- [117] Capobianco, N., Basile, V., Loia, F., & Vona, R. (2021). Toward a sustainable decommissioning of offshore platforms in the oil and gas industry: A PESTLE analysis. *Sustainability*, 13(11), 6266. [Google Scholar↗](#)
- [118] Rastogi, N. I. T. A. N. K., & Trivedi, M. K. (2016). PESTLE technique—a tool to identify external risks in construction projects. *International Research Journal of Engineering and Technology (IRJET)*, 3(1), 384-388. [Google Scholar↗](#)
- [119] Cox, J. (2021). The higher education environment driving academic library strategy: A political, economic, social and technological (PEST) analysis. *The Journal of Academic Librarianship*, 47(1), 102219. [Google Scholar↗](#)
- [120] Doherty, I., Steel, C., & Parrish, D. (2012). The challenges and opportunities for professional societies in higher education in Australasia: A PEST analysis. *Australasian Journal of Educational Technology*, 28(1), 105-121. [Google Scholar↗](#)
- [121] Parameshwari, V., Kumar, P. S., Marla, A. P., & Rai, S. (2022). Comparison between Retrieval Time of Manual and Electronic Medical Records—A Case Study. *International Journal of Case Studies in Business, IT and Education (IJCSBE)*, 6(2), 1-14. [Google Scholar↗](#)
- [122] Crasta, L. C., & Shailashri, V. T. (2021). Impact of Mobile Phone Services on the Traditional Telecommunication Services in India. *International Journal of Case Studies in Business, IT and Education (IJCSBE)*, 5(2), 211-225. [Google Scholar↗](#)
- [123] D'Silva, R. J. (2021). A case study of Cashew Industry in Karnataka. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 5(2), 329-341. [Google Scholar↗](#)
- [124] Rappa, M. (2007). Business Models on the Web. <https://digitalenterprise.org/models/> Referred on 10/08/2023.
