

Simulation Exercise: Learning Entrepreneurship Through Local Market Business Opportunity Identification

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Abstract

This simulation exercise offers transformative experiential learning in entrepreneurship. Integrated with the knowledge, skills and attitudes framework, this exercise immerses students in real-world scenarios of local livelihood businesses. Through hands-on engagement, students propose solutions, fostering critical thinking and problem-solving aligned with Bloom's Taxonomy. The exercise yields profound experiential learning outcomes, empowering students with insights, skills and attitudes vital for entrepreneurial success.

Keywords

Experiential learning, entrepreneurship education, KSA model, livelihood business, simulation exercise

Introduction

The strategic steps taken to reduce extreme poverty worldwide have opened up opportunities for entrepreneurial solutions to various social challenges, bridging the gap between developed markets and bottom-of-the-pyramid segments (Pralhad, 2019). Entrepreneurship at the bottom of the pyramid focuses on creating sustainable livelihood opportunities for individuals in low-income segments

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(Dhiman & Arora, 2024; Senapati & Parida, 2024; Sharma et al., 2023). Although these livelihood businesses operate in local markets and earn income daily, elements of entrepreneurship such as risk-taking, capital sourcing, management and resource gathering are still prevalent. Empowering these businesses with better tools, resources, and training is essential for generating income and improving their quality of life. This approach not only fosters economic independence but also drives social change by addressing issues such as poverty, unemployment, and inequality.

The term ‘bottom of the pyramid’, also known as the ‘base of the pyramid’ refers to the largest and poorest socio-economic group in the economic chain, a concept popularised by Prahalad and Hart (2004). This group typically includes people who live on less than a few dollars a day, making up the largest portion of the global population but commanding a small share of global income and resources (UNDP, 2014). Most of these individuals are involved in some form of income generation, either by working for someone or through livelihood businesses.

A recent report by the World Poverty Clock (2024) shows that in India, more than 30 crore people live below the extreme poverty line, with 94% of these individuals residing in rural areas. The report emphasises that to reduce this number, strict measures need to be taken either to generate employment opportunities for these people or to provide a support system that can make them self-reliant. Another approach is to implement inclusive business education and sensitise youth to it. Inclusive business models include the poor on the demand side as clients and customers and on the supply side as employees, producers and business owners at various points in the supply chain (UNDP, 2014).

In the realm of entrepreneurship education, it becomes necessary to include these concepts in the main curriculum. Therefore, students need to grasp the intricate dynamics of businesses operating at the grassroots level (Dalglish & Tortelli, 2016; Prahalad, 2019; Yadav & Goyal, 2015).

Understanding Entrepreneurship from the Bottom-of-the-pyramid

The authors here advocate that in countries like India, where a significant portion of the population relies on local market livelihood businesses for sustenance, gaining insights into the challenges faced by these livelihood businesses is paramount. Despite limitations in capital, minimal use of technology and small-scale operations, these businesses embody the essence of entrepreneurship, offering invaluable lessons to aspiring entrepreneurs. In the Indian context, a large segment of the population depends on generating income from roadside businesses (hereafter, referred to as vendors) dealing in perishable items such as selling fruits, vegetables, meat, flowers, quick snacks/fast food, and so on. These vendors operate in bustling local markets, where they navigate through a myriad of challenges daily. From managing limited capital and other resources, and fluctuating supply chains to tackling socio-economic constraints, they embody resilience and resourcefulness in the face of adversity.

Unlike tech-based businesses in emerging sectors, local market livelihood businesses operate within tight constraints. They face challenges emanating from high liquidity and working capital crunch, little or no storage space for perishable items, competitions from nearby similar stalls and high uncertainty of footfall due to raising due to seasonal challenges and many more; these businesses need specific interventions to help them overcome these challenges. Despite the diverse nature of challenges and unique solutions needed, they encapsulate all elements of entrepreneurship, including opportunity identification, resource generation or allocation, risk-taking, innovation, customer relationship management, adaptability, decision-making, etc. For students learning and aspiring to venture into entrepreneurship, understanding the nuances of these grassroots businesses is indispensable.

Teaching Entrepreneurship Through Simulation Games: A Literature Review

Simulation games implemented in business education have proven to be a viable method of teaching complex business concepts. Learning through business simulation games has been in practice for six decades, starting in 1955 (Goi, 2018). There are various ways to adopt simulation games in classroom learning, including computer-led simulations, role plays and field activities. While the former two focus on developing learning in a controlled environment, the latter emphasises the importance of exposure and interaction with various others.

The learning generated through hands-on experience facilitates the transfer of learning among participants and bridges the gap between academic skills and industry needs. A study analysing 108 simulation game seminars in Germany found that the insights gained from simulation experiences provide professional learning benefits to entrepreneurs (Huebscher & Lendner, 2010). Social interaction and psychological safety positively impact knowledge development (Xu & Yanag, 2010). However, caution is needed when developing business simulation games. Sometimes students follow instructions without fully understanding the game, and cultural differences (Bagdonas et al., 2010), interpretation of factual data and understanding of formal and informal scenarios can hinder the learning process. Additionally, focusing solely on winning (Fox et al., 2018) can deviate players from generating a meaningful learning experience. For simulation games that integrate ethics as a core part of learning, failure (Cope, 2011) is considered a positive outcome. Encouraging players to engage in trial and error, risk-taking and experiencing failure in a safe environment is essential.

The Implemented Simulation Exercise

This simulation exercise represents an innovative initiative devised and implemented by the authors within their entrepreneurship course. This simple yet impactful simulation has provided students with a unique perspective on business and self-employment generation. Through immersive experiential learning,

students have not only gained valuable knowledge but have also honed essential skills and cultivated attitudes crucial for entrepreneurial success.

In a university or institutional course on entrepreneurship, students were assigned an experiential learning activity centred on identifying business opportunities and suggesting solutions for local livelihood businesses operating in street markets. The primary goal of this exercise was to deeply immerse students in real-world entrepreneurial scenarios, fostering crucial skills such as recognising opportunities, solving problems and engaging with the community.

This simulation exercise implemented in business education exemplifies how addressing pressing social problems requires experimentation rather than debate. Through this experiential learning approach, students understand real-world livelihood scenarios and discover innovative solutions that can improve the lives of the poor while also enhancing business viability. The potential is immense: participants learn how entrepreneurial strategies can simultaneously drive social impact and business success, preparing them to leverage these opportunities in diverse markets. Local problems need local solutions. Nurturing local markets and cultures, leveraging local solutions and generating economic opportunities can augment this learning.

In crafting this simulation exercise, the authors aimed to embed entrepreneurial knowledge, skills and attitudes (KSA) (Acharya & Chandra, 2019) deeply into the overall learning and nurturing journey for students. As shown in Figure 1, the nurturance of KSA engages students at four out of six levels of Bloom's Taxonomy model of learning framework. These levels include 'understanding' (acquired through knowledge), 'applying' (skills for applying entrepreneurial principles), 'analysing' (attitudes and critical thinking) and 'evaluating' (empathy development and social responsibility) (Bloom, 1994; Bloom et al., 1956).

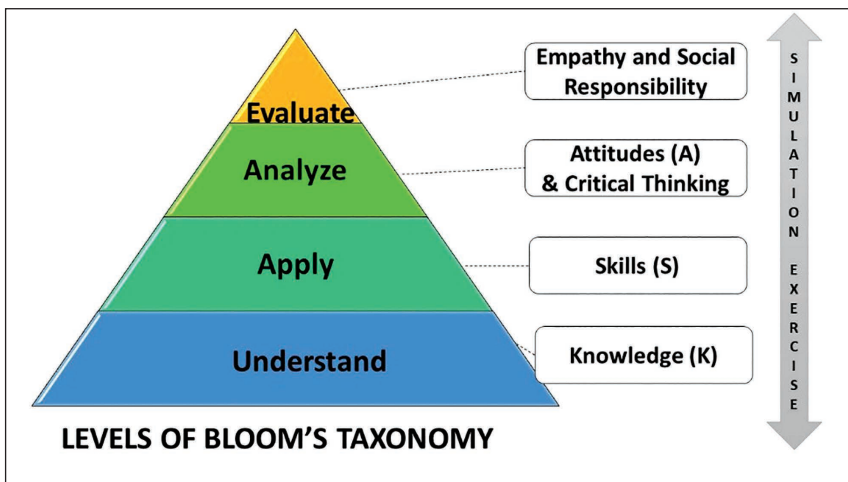


Figure 1. Showing the KSA Integration Through Bloom's Taxonomy Model of Learning.

Understanding how KSA enables successful entrepreneurship and the development of a micro and small enterprise is crucial, particularly at the base of the pyramid. Micro and small enterprises are expected to create the majority of the jobs needed for the 470 million individuals entering the labour market by 2030 (ILO, 2015). The UNDP report (2014) highlighted that policymakers worldwide view support for entrepreneurship as one of the most politically feasible and effective measures to reduce inequality. This underscores the importance of fostering entrepreneurial capabilities to drive economic growth and job creation at the grassroots level.

Hence, this simulation exercise aims to help students understand the challenges faced by local market livelihood businesses in India, fostering empathy for grassroots entrepreneurs and identifying opportunities for innovation and growth. By applying entrepreneurial principles such as opportunity recognition and customer relationship management, students will develop critical thinking, social responsibility and a deeper understanding of the socio-economic constraints these businesses face. This experiential learning cultivates an appreciation for the resilience and resourcefulness of micro-level or grassroots livelihood businesses. This experiential learning exercise is meticulously crafted to cultivate students' entrepreneurial acumen by immersing them in real-world contexts and challenging them to propose solutions for complex challenges. Designed to foster a comprehensive understanding of entrepreneurship, it hones practical skills and cultivates a mindset conducive to entrepreneurial success. Through engagement in this exercise, students undergo holistic learning and skill development across multiple cognitive domains.

Following are the specifications for implementing the exercise.

Group size: Four to five students per group

Duration: This exercise spans multiple sessions, structured as follows:

- ✓ Thirty minutes: The instructor provides an overview of the activity in class, guiding students in formulating interview or survey questions to understand the current challenges faced by local livelihood businesses. These questions will serve as the foundation for data collection.
- ✓ Two to three hours: Students engage in field data collection in the local market, immersing themselves in the realities of these businesses.
- ✓ One hour: Following data collection, students present their observations, insights and proposed solutions within their groups. Utilising an ideation canvas (Gonzalez et al., 2024) and a business model canvas (Osterwalder et al., 2010) students share their findings with the class. The instructor concludes the session by examining the feasibility of these solutions and discussing necessary support mechanisms for implementation.
- ✓ One to two hours: In the subsequent session, students return to the field to pitch their solutions to the vendors, seeking their feedback and willingness to participate. Additionally, students may offer handholding support to vendors in implementing these identified solutions.

Exercise implementation: After receiving the briefing in class, students formed groups and embarked on fieldwork to interview vendors in local markets. They conducted in-depth interviews, covering various aspects such as demographic and socio-economic analysis, daily operations, challenges faced and resource/capital arrangements. Upon returning to the classroom, students documented their findings and engaged in a discussion on improving the vendors' supply chain lifecycle. Students identified numerous challenges faced by the vendors while operating their businesses. A brief overview of these markets is explained as follows.

Local Market where Data are Collected

The students who participated in the simulation exercise were pursuing MBA degrees from reputed educational institutions in two different cities in India: Kolkata and Nagpur.

1. Ruby Market, Kolkata: The Ruby Market located in the Kasba Industrial Estate in East Kolkata is a bustling hub for purchasing gemstones and wholesale and retail products ranging from garments to vegetables, fruits and quick snacks. The market is always lively, attracting local people and tourists who visit until late at night. Kolkata, a metropolitan city and the capital of West Bengal, is known for being an affordable place for local shopping and a major tourist attraction. The student teams spent almost 8 hours in this market, observing and identifying local vendors and collecting data from them.
2. Nagpur city and nearby villages: Another set of students studying in an institution 35 km from Nagpur had to travel to nearby villages and the city itself to collect data. They explored small villages such as Dorli and Kalmeshwar, as well as Nagpur city, located in Maharashtra. Dorli, situated in Katol Taluka, and Kalmeshwar, near Nagpur district, offered limited opportunities to interact with a large number of vendors. The majority of people in these villages depend on agriculture and livestock, with some involved in making food items like quick snacks to sell in nearby districts. Being situated along National Highway (NH361) provided some villagers the opportunity to set up small shops to serve items, tea and quick snacks to vehicles passing by.

Visiting Nagpur city provided students with broader exposure to a larger segment of vendors. Nagpur, one of Maharashtra's fastest-growing cities, is famous for its tiger reserves, orange and mango farming, and textile apparel industry. Exploring these markets took more time and effort due to challenges in transportation and logistics, as well as language barriers.

Despite this, the issues and challenges faced by vendors were observed to be universal. The data collected and presented were collated holistically, and the solutions proposed were designed as a pool of solutions that could be easily implemented. The findings and solutions to overcome these challenges are summarised in the following section.

Findings Through Data Collection

Below listed are the findings observed by students, which show the challenges/issues faced by vendors while operating their businesses.

1. *Decreased profit margins, shrinking customer base and rising competition:* Vendors grapple with declining profit margins due to increased competition from neighbouring stalls, resulting in a diminishing customer base. One instance showed that vendors were finding it challenging to retain customers who were enticed by alternative food options offered by nearby competitors, impacting their overall sales and profitability.
2. *Daily operations and supply chain management:* Fluctuations in demand and seasonal variations pose significant challenges to vendors in maintaining consistent sales. One of the vendors selling vegetables narrated that during periods of low demand or unexpected shifts in consumer preferences, they were struggling to cover their weekly expenses and manage their working capital effectively, leading to financial strain and operational hurdles.
3. *Geographical, situational and seasonal challenges:* Vendors encounter difficulties related to geographical location and situational factors such as the impact of COVID-19 lockdowns. For instance, vendors situated in remote areas with limited footfall are facing challenges in attracting customers, impacting their sales and revenue generation. Additionally, seasonal fluctuations in demand for specific fruits, vegetables and foods were further exacerbating these challenges in maintaining steady sales throughout the year.
4. *Inherited challenges despite generational business operation:* Despite inheriting businesses passed down through generations, some continue to grapple with similar challenges, highlighting the persistent nature of issues such as competition, changing consumer preferences, the absence of working capital arrangements and operational constraints.
5. *Infrastructure limitations:* The lack of a seating area and cramped shop space had adversely affected the customer's preference to purchase from them, potentially leading to reduced customer satisfaction and retention. For example, vendors shared that their customers were deterred from their stalls because they found it inconvenient to browse or make purchases in a crowded or poorly organised space.
6. *Limited access to credit facilities and high interest rates:* Yet another challenge faced by vendors relates to accessing credit facilities and securing favourable interest rates from money lenders. This significantly impacted their financial stability and ability to invest in business expansion or address cash flow gaps during lean periods. Additionally, high interest rates imposed by money lenders were exacerbating vendors' financial challenges, leading to increased debt burdens and limited opportunities for growth and development. It was observed that the majority of them have taken microloans from local moneylenders on high interest (20%–25%) which is making it difficult for them to repay in strict financial situations.

7. *Absence of proper storage facilities for highly perishable items:* Vendors often lack adequate storage facilities for highly perishable items, such as vegetables/fruits or flowers, which must be sold or disposed of by the end of the day to prevent spoilage. Without proper storage options, vendors were forced to sell these items at lower prices or discard them, resulting in financial losses. For example, a vegetable vendor had to reduce the prices of unsold products towards the end of the day to avoid waste, impacting their overall profitability.
8. *Early morning procurement from local wholesale markets:* Vendors typically wake up early in the morning to procure fresh produce from local wholesale markets, adding to the length and complexity of their working day. This early start not only requires vendors to invest additional time and effort but also entails transportation costs associated with travelling to and from the wholesale market. For instance, a fruit vendor shared that he had to navigate through heavy traffic or rely on costly transportation options to access wholesale markets, further straining their resources and affecting their overall profitability.
9. *Lack of access to institutional credit and capital support:* Many vendors were facing challenges in accessing credit and capital support from formal financial institutions. As a result, they often resort to borrowing from money lenders, who may impose exorbitant interest rates and short repayment periods. For instance, a street food vendor who was struggling to secure a loan from a bank was turned to a local money lender for financial assistance. In some cases, these money lenders have also been observed to resort to coercive tactics, such as intimidation and harassment, to ensure timely repayment. For example, a vegetable vendor faced many threats from a local loan shark demanding immediate repayment, creating a hostile and stressful environment for them.
10. *Lack of funds for family and personal healthcare:* Due to their limited earnings and financial struggles, many vendors found themselves unable to afford adequate healthcare and medical expenses for themselves and their families. As a result, they often face vulnerability to diseases and untimely deaths due to the inability to access necessary medical treatment. For instance, a quick snack vendor had to postpone seeking medical attention for a persistent health issue due to financial constraints, leading to worsening health conditions and potential long-term consequences. This financial strain not only affects her (vendor's) physical well-being but also has created emotional distress and anxiety about the health and safety of her family members.

Brainstorming Solutions for Vendors' Challenges

Following are the observations and findings on the challenges faced by vendors. Students engaged in a collaborative brainstorming session during classroom discussions to propose solutions aimed at addressing these issues. These solutions were presented through ideation (Gonzalez et al., 2024) and the business model

canvas (Osterwalder et al., 2010), which encompass various aspects of business expansion and related strategies, such as:

1. *Implementation of digital systems*: Students proposed the adoption of digital payment and weighing methods to streamline transactions and improve efficiency. Additionally, they suggested leveraging platforms like WhatsApp or telephonic calls to facilitate orders and deliveries and integrating digital payment methods, enhancing convenience for both vendors and customers.
2. *Diversification of product offerings*: Students suggested expanding the range of products offered by vendors to attract a broader customer base. This could include introducing new fruits, vegetables, or a variety of juices and food items to cater to diverse preferences and seasonal demands.
3. *Menu development and marketing*: Recognising the importance of attracting customers, students assisted vendors in developing appealing (printed or handmade) menus for fast food stalls. They also emphasised the significance of menu variation within their budget range to cater to diverse customer preferences. Furthermore, students collaborated with vendors to invest in small improvements in storefronts and signage, creating a more inviting and recognisable brand identity and signage visible from the street.
4. *Waste management solutions*: Observing the lack of sustainable waste disposal practices, students educated vendors on environment-friendly solutions. This included partnering with other local vendors providing eco-friendly disposable plates, cutlery and water utilisation solutions. Vendors were also encouraged to collaborate to manage competition and explore alternative methods for waste disposal.
5. *Collaboration with local farmers*: To minimise the wastage of surplus produce and strengthen community ties, students proposed initiating partnerships with local farmers to repurpose excess fruits and vegetables as cattle feed or compost, promoting sustainability and resource efficiency.
6. *Improvement of infrastructure*: Addressing the infrastructure limitations identified during data collection, students recommended investing in improvements (within their budget) such as creating a designated seating area for customers and optimising the layout of the shop to enhance visibility and accessibility.
7. *Community engagement and marketing*: Students emphasised the importance of community engagement and marketing initiatives to increase visibility and attract new customers. This included organising community events, leveraging social media platforms, or offering loyalty rewards programmes to incentivise repeat business.
8. *Distribution channel development*: Students helped vendors develop personalised offers and loyalty rewards programmes for customers, enhancing customer retention and satisfaction. Additionally, students assisted vendors in expanding their distribution and delivery to nearby residential and corporate houses.

9. *Access to financial resources:* Addressing the challenge of limited access to credit facilities, students explored options such as connecting vendors with microfinance institutions, local panchayat, or government schemes offering low-interest loans to support business expansion and investment in infrastructure. Further students also assisted them in filling out application forms to avail of health insurance and medical support for themselves and their families.

A quick summary of these interventions is described below in a few case studies from local vendors (Figures A1 and A2).

Vendor Persona

Some of the vendor personas are discussed in three case studies as follows.

1) **Case Study: Anand—Street Vendor in Fruit Trade**

Anand migrated from an interior village to Nagpur to earn money. Hailing from a humble background, he embarked on this journey by selling his only possession and companion he brought from his village, the goat. He got ₹6,000 from selling his goat and utilised this as his initial investment. With diligent efforts and additional support from his wife, who sold her gold chain to fuel business expansion, they established a fruit trade venture. Their perseverance over 25 years has sustained this business. Operating with a monthly revenue of ₹30,000 and a notable profit margin of ₹20,000, Anand's fruit business employs a demand-driven inventory model that needs stocking fruits based on customer preferences and seasonal demands.

Challenges faced: Anand faced a myriad of challenges in his fruit trade business, predominantly stemming from a shifting market landscape. The dwindling profit margins, exacerbated by heightened competition and evolving consumer preferences, are creating formidable hurdles to sustaining profitability over time. On top of that market saturation, coupled with the emergence of alternative food options, further intensifies this competitive landscape, posing a significant threat to his business viability. Additionally, changing consumer behaviours, with a preference for fast food alternatives, also contributed to a shrinking customer base.

Solutions suggested: In response to these challenges, the students suggested Anand devise several strategies aimed at adapting and thriving in the competitive market environment. Students suggested that by exploring additional product offerings, such as diversifying the fruit selection, he can endeavour to broaden the customer base and mitigate the impact of shrinking profit margins. He agreed and started implementing these changes in a small phase-wise manner by leveraging enhanced marketing techniques, including the utilisation of the WhatsApp platform, which allowed him to amplify product promotion efforts, reaching a wider audience and enhancing his visibility.

Moreover, he places a strong emphasis on quality and variety, striving to offer high-quality diverse fruits to attract discerning customers and differentiate his business from competitors. Central to his operational success were key

partnerships with reliable fruit suppliers and strategic allocation of key resources, such as raw materials and attractive display arrangements, aimed at enhancing the overall customer experience.

In terms of distribution, Anand adopted a flexible strategy based on demand, minimising wastage and optimising costs to ensure freshness and adaptability in meeting customer needs. To address changing demographics and heightened competition, he implemented customer segmentation and attraction strategies, including discounts on bulk purchases, seasonal promotions and enhancing shopping experiences through attractive displays.

Despite maintaining stable revenue, the challenges of declining profit margins and intensified competition necessitate ongoing strategic adjustments in marketing and product offerings. Anand acknowledged the support he gained from students and the importance of reinvesting profits into the business, covering initial investments, permissions, infrastructure and ongoing operational costs, as essential for long-term sustainability and continued growth.

2) Case Study: Mala Dutta—Chicken Shop Owner

Mala Dutta operates a chicken shop in Kolkata, catering to customers from the lower-class segment. With a family of four, including her husband and two children, Mala faces challenges typical of small-scale businesses, compounded by limited access to basic utilities such as electricity and regular water supply at home. She stays inside this chicken shop with her family.

Challenges: She faces a multitude of challenges, including fluctuating demand for chicken products, stiff competition from larger poultry establishments and limited space for storage and display. The unpredictable shifts in demand have posed operational challenges, requiring adaptability to meet customer needs effectively. Moreover, the presence of larger poultry shops intensifies competition, necessitating innovative strategies to differentiate her offerings and retain customers. Additionally, space constraints hinder the efficient storage and display of products, impacting operational efficiency and customer satisfaction.

Low-cost Solution: Students suggested Mala adopt resourcefulness and resilience by implementing low-cost solutions. By exploring collaboration opportunities with local street food vendors and small hotels, Mala diversified her market reach and tapped into the business-to-business segment. Furthermore, considering the purchase of second-hand cold storage units presented a practical solution to address storage challenges and ensure the efficient preservation of products. Mala's willingness to adapt to strategic initiatives underscores her proactive approach to overcoming obstacles and sustaining her business in a competitive environment. Through her resourcefulness and adaptability, Mala endeavours to navigate the complexities of the poultry industry and drive long-term success for her chicken shop.

3) Case Study: Nandini's Tea Stall: Overcoming Challenges in a Roadside Business

Nandini, a resilient person, manages a humble tea stall adjacent to Ruby Market in Kolkata. Alongside two dedicated family members, she serves diverse

customers consisting mainly of students, workers and daily wage earners seeking quick bites and tea after long days. Despite her tireless efforts, Nandini encounters several challenges in sustaining her roadside venture.

Challenges faced: One of the primary hurdles Nandini faces is the low footfall at her stall due to its location along a highway, resulting in minimal customer traffic. Furthermore, the perishable nature of the food items she prepares, including samosas and bread pakoras (popular fried snacks), adds pressure to sell them quickly, especially during rainy weather when footfall dwindles further. Despite her dedication, Nandini's monthly earnings revolve around a modest ₹7,800, indicating a pressing need for improvement to sustain her business and livelihood.

Proposed solutions: Students proposed low-cost, effective solutions in response to these challenges, and Nandini readily accepted these innovative solutions to enhance her stall's visibility and attract more customers. Students helped her to create an eye-catching handmade signage board with bold colours and bright lighting. She showed interest in creating a more inviting atmosphere, particularly during evening hours. Additionally, Nandini diversified her menu by offering a variety of snacks and introducing popular packaged chips and soft drinks to cater to diverse customer preferences.

To incentivise purchases and increase sales, Nandini introduced combo deals, such as pairing a snack with a soft drink, at discounted prices. Moreover, realising the need for hygiene and cleanliness, she ensured her stall's surfaces, utensils and display areas were frequently cleaned. Despite her limited budget, Nandini invested in an economical cooling mechanism using a thermocol box insulated with ice packs to preserve the freshness of perishable snacks and beverages throughout the day. This box does not need electricity and works on ice, which helps to retain cool and freshness. Through her resourcefulness and resilience, Nandini exemplifies the spirit of entrepreneurship, demonstrating how determination and innovative thinking can overcome challenges in running a roadside business. Her journey serves as an inspiration for aspiring entrepreneurs navigating similar hurdles in the competitive landscape of small-scale enterprises.

Exhibit I: Teaching Notes

The teaching notes summarised here are based on some theories and the reflection of learning that the authors of this article have gained through their subject matter and experience by interacting with the ecosystem. Most of the foundations explained are based on the teaching-learning methods developed by the authors themselves.

Understanding Business Opportunity Identification

Business opportunity identification happens at various levels, starting with opportunity recognition and identifying patterns to connect those missing dots that can serve as a link between problems and solutions. Hougaard (2005) defines opportunity seeking as the ability to see and understand problems and develop

unexpected solutions from them. Here, we emphasise that aspiring entrepreneurs should prioritise pattern recognition as the initial step in opportunity identification. Pattern recognition entails actively seeking opportunities and establishing connections between different elements (Matlin, 2005). Once these patterns are recognised, they serve as the foundation for identifying novel business prospects and drawing links between seemingly unrelated events or activities. These connections subsequently facilitate the development of unexpected solutions to prevailing challenges.

Pattern Recognition in Opportunity Identification

The authors here augment that pattern recognition in opportunity identification (Baron, 2006) involves the ability to discern recurring themes or trends within a given context, which can then be used to identify potential business opportunities (Lumpkin & Lichtenstein, 2005; Shane, 2003, p. 9). In the context of this simulation exercise, students observed common challenges faced by vendors, such as decreased profit margins, limited access to credit facilities and infrastructure limitations, which may initially appear dissimilar. However, through pattern recognition, students begin to recognise underlying similarities or patterns across different vendors. For example, they observed that multiple vendors struggled with inadequate storage facilities for perishable items or were facing harassment from money lenders. By identifying these patterns, students inferred broader challenges prevalent among local market businesses and subsequently proposed solutions that address these common issues.

Pattern Recognition at a Macro Level

The authors here argue that opportunity recognition at a macro level can help to generate solutions. Macro-level opportunity recognition involves identifying trends, patterns and challenges at a broad societal or industry level (Jabeur et al., 2022; Omri et al., 2024). Pattern recognition at a macro level, within the context of this simulation exercise, involves identifying overarching trends or patterns that span across multiple local market businesses. Students observed various factors such as fluctuating demand, rising competition and limited access to credit facilities. Through this process, students begin to recognise broader patterns that transcend individual businesses and common challenges faced by vendors operating in similar geographical locations or within specific industries.

For instance, students observed that vendors located in areas with low foot traffic tend to experience decreased profit margins, regardless of the specific products they sell. Similarly, they identified a pattern of reliance on informal lending sources, such as money lenders charging exorbitant interest rates, among vendors across different market segments.

The authors here observed that by recognising these macro-level patterns, students gained insights into universal issues affecting local market businesses and have developed low-cost, technology-limited strategic solutions (Baron, 2006) that address these broader challenges. This approach has enabled students to think

critically about the underlying dynamics shaping livelihood businesses and to propose interventions that have the potential to create meaningful impact across diverse business contexts. For aspiring entrepreneurs, pattern recognition can be leveraged by analysing demographic shifts, technological advancements and regulatory changes to identify emerging needs and market gaps. By understanding these macro-level dynamics, entrepreneurs can develop innovative solutions that address widespread problems and capitalise on growing trends, ensuring the relevance and success of their ventures in the long term (Jabeur et al., 2022).

Let us understand this by taking the demographic (Baron, 2006) as one of the factors of pattern recognition. For instance, in India, the needs of different demographic groups vary significantly, such as youth, women and the elderly population. As far as Indian demographics are concerned, it became crucial to identify business solutions that would be needed by an ageing population. It is estimated that by 2050, 20% of India's population will be over 60 years old (Ranjan & Muraleedharan, 2020; Sahoo et al., 2021; UNFPA India, 2023). With changing family structures, shifting age dependency ratios and inadequate state-provided services, there is a growing demand for businesses catering to the elderly population. Understanding this will help aspiring entrepreneurs to develop business ideas in sectors such as elderly care, healthcare, personalised care centres, social security, financial investment and management, retirement homes, and so on. Innovative and sustainable, or low-cost solutions, can become a boon for these sectors.

Opportunity Recognition from the Customer Preference Perspective

Opportunity recognition from the customer preference perspective (Baron, 2006; Jabeur et al., 2022) in the context of this simulation, exercise involves understanding and analysing the evolving needs and preferences of target customers. Students explore why certain business models, such as ride-hailing services like Ola and Uber or food delivery platforms like Zomato and Swiggy, are in high demand among consumers. These services thrive on repeat customer needs, leading to a loyal customer base and when this gets multiplied, these kinds of business models will work in a mass segment. By examining the repeated needs and behaviours of customers, students identify those patterns that indicate opportunities for entrepreneurial ventures.

Similarly, in Germany, the white goods industry offers rental options for quintessential kitchen supplies, bedding and household equipment, catering to the needs of a population living in rented apartments. This kind of model can work in places such as Mumbai and Bengaluru (and similar Indian metropolitan cities) where the majority of the population lives in rented apartments and does not want to purchase equipment for longer-term usage.

By examining customer preferences from a macro perspective, students gain insights into emerging market trends and consumer behaviours, enabling them to identify entrepreneurial opportunities that align with evolving customer needs. Navigating how opportunities or pattern recognition happen, such as individual opportunity (Shane, 2003), or in consideration with cognitive skills (Shane &

Venkataraman, 2000), networking skills (Chea, 2008), organisational learning process (Lumpkin & Lichtenstein, 2005), career choices (Lee & Venkataraman, 2006) and so on, entrepreneurs can anticipate needs, connect with external developments and formulate strategies for success.

Hence, looking at these theoretical contributions, this simulation exercise will engage students in opportunity identification and pattern recognition by analysing data collected from local livelihood businesses. By identifying recurring challenges and customer preferences, students will develop innovative solutions tailored to meet the specific needs of these businesses. This process will not only deepen their understanding of entrepreneurship but also equip them with valuable skills in identifying market opportunities and formulating effective strategies.

Following are the teaching notes that would be useful for instructors.

Teaching Notes for Simulation Exercise

This simulation exercise is designed to immerse students in the real-world context of entrepreneurship by engaging them in the process of identifying business opportunities and proposing solutions for local livelihood businesses. It is particularly relevant in countries like India, where a significant portion of the population depends on such businesses for their livelihood. Through this exercise, students will gain insights into the challenges faced by these businesses and develop entrepreneurial KSA (Acharya & Chandra, 2019) crucial for success in the field. This teaching note would be resourceful for instructors.

Immersing KSA Through this Activity

This activity facilitated holistic learning and skill development, equipping students with the KSA necessary to thrive in the entrepreneurial landscape and make meaningful contributions to their communities (Acharya & Chandra, 2024). Through the presentation of these innovative solutions, students showcased their proficiency in applying entrepreneurial principles and employing creative problem-solving techniques to address the real-world challenges encountered by local livelihood businesses. By integrating the KSA, an entrepreneurship learning framework model developed by Acharya and Chandra (2019) (see Figure 1), this simulation exercise immerses students in real-world scenarios faced by local livelihood businesses. Now let us see what these three elements of the framework are.

1. **Knowledge:** Students applied their understanding of business fundamentals, market dynamics, and customer behaviour to develop informed solutions tailored to the specific needs of the vendors (Bloom's Taxonomy remembering level). Additionally, they utilised their knowledge of technological advancements and industry trends to propose innovative (yet capital-effective) strategies for business expansion and improvement.
2. **Skills:** The exercise honed students' skills in critical thinking, analysis and communication as they evaluated challenges, generated ideas and presented solutions clearly and compellingly (Bloom's Taxonomy

application level). Furthermore, students demonstrated practical skills in project management, collaboration and negotiation as they worked collaboratively to develop and refine their proposals.

3. **Attitudes:** By actively engaging with real-world challenges and demonstrating empathy towards the vendors' plight, students cultivated attitudes of resilience, adaptability and social responsibility (Bloom's Taxonomy value and internalising level). They exhibited a proactive and solution-oriented mindset, showing a willingness to embrace uncertainty and navigate complex business environments to drive positive change.

Exposing Students to Local Businesses

Instructors must emphasise here the significance of understanding local businesses, especially in countries like India, where they play a pivotal role in the socio-economic fabric. To give an in-depth understanding to students, educators must highlight the operational dynamics of these businesses, particularly the relevance of the hub-and-spoke model (Elrod & Fortenberry, 2017), which finds its roots in the work of Philip Kotler's human-to-human marketing (Kotler et al., 2021). The hub-and-spoke model was first introduced by Delta Airlines in the year 1955 explaining the push-and-pull approach to innovation. The model floats in the idea that ideas and solutions flow between business units and a central innovation system.

Understanding the Hub-and-spoke Model

In this section, we discuss how the hub-and-spoke model (Elrod & Fortenberry, 2017; Nicolopoulou et al., 2017) functions in local businesses, wherein a central hub coordinates with multiple peripheral spokes to streamline operations and reach customers. Here in this exercise, the solution in the hub-and-spoke model suggests that a central hub at the centre of the city can be created as a central warehouse, and distribution centres can be created through a spoke method. These hubs should be strategically located to maximise accessibility for both vendors and customers. Once the hub locations are identified, vendors can establish spoke connections by collaborating with neighbouring vendors or forming partnerships with nearby businesses. These spoke connections allow vendors to leverage each other's strengths and resources, creating a network of support within the local market ecosystem. These spoke locations in nearby areas will provide local access to essential supplies and services. Illustrate the application of this model in direct-to-customer businesses, where the focus is on enhancing customer satisfaction, retention and attraction.

Thus, implementing a hub-and-spoke model will allow vendors to streamline their supply chain operations by centralising procurement and distribution activities at the hub locations. This centralised approach enables vendors to consolidate orders, negotiate better deals with suppliers and minimise transportation costs. By pooling resources and inventory at the hub locations, vendors can ensure consistent availability of products across their network of spokes. This improves

customer satisfaction by reducing stockouts and providing a wider selection of goods to choose from. Thereby also creating a seamless customer experience.

Conclusion

This simulation exercise offers a unique opportunity for students to bridge theoretical knowledge with practical experience in entrepreneurship education. By engaging with local businesses and leveraging theoretical frameworks, students not only develop essential entrepreneurial competencies but also gain a deeper appreciation for the multifaceted nature of entrepreneurship in driving socio-economic progress. The exercise illuminated the real-world challenges faced by livelihood businesses, such as fluctuating demand, infrastructure limitations and access to credit. Students proposed innovative solutions, including improved supply chain management, enhanced customer engagement strategies and better access to financial resources. The hands-on experience of pitching these solutions and receiving feedback from vendors enriched their learning and underscored the importance of adaptability and resilience in entrepreneurship.

Implementing these solutions in real-time provided students with invaluable insights into the complexities of managing small-scale businesses, from operational hurdles to strategic decision-making. Experiential learning fosters critical thinking (Fox et al., 2018), empathy and a problem-solving mindset (Acharya & Chandra, 2019; Cope, 2011), preparing students to navigate diverse business environments effectively. Moreover, the exercise emphasised the social responsibility (Bagdonas et al., 2010) of entrepreneurs in uplifting local communities, highlighting the role of entrepreneurship (Huebscher & Lendner, 2010) in addressing poverty and inequality (Senapati & Parida, 2024). Ultimately, this simulation underscores the significance of experiential learning in entrepreneurship education. By immersing students in the realities of local livelihood businesses, it cultivates a holistic understanding of business dynamics and equips future entrepreneurs with the skills and mindset necessary for sustainable success and socio-economic impact.

Limitations

This simulation exercise is constrained by geographic, cultural and time limitations, potentially impacting the generalisability of findings.

Significance

The exercise provides a hands-on approach to understanding grassroots entrepreneurship, fostering empathy and critical thinking.

Theoretical, Practical and Social Implications

This exercise theoretically enriches entrepreneurial education, practically enhances problem-solving skills and socially promotes economic development at the grassroots level.

Annexure. Glimpse of Some Business Model Canvas Developed by Students.

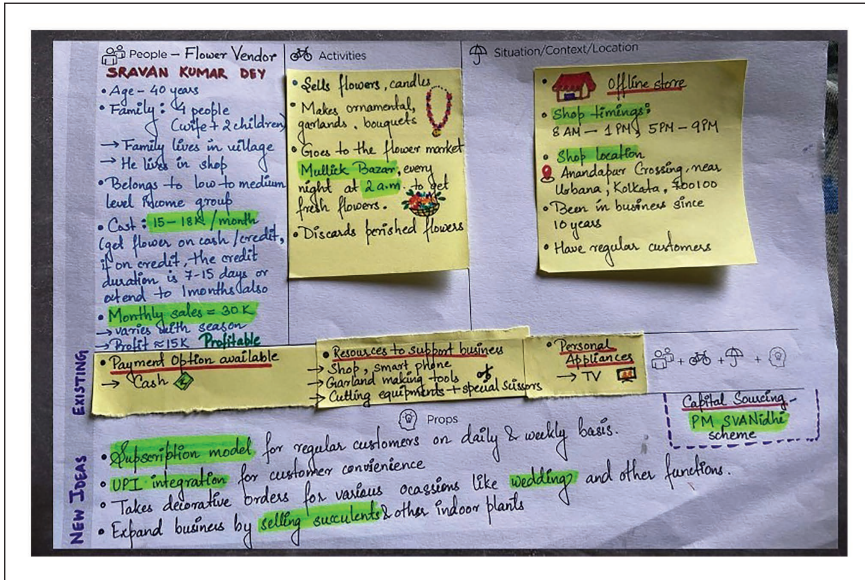


Figure A1. Business Model Canvas.

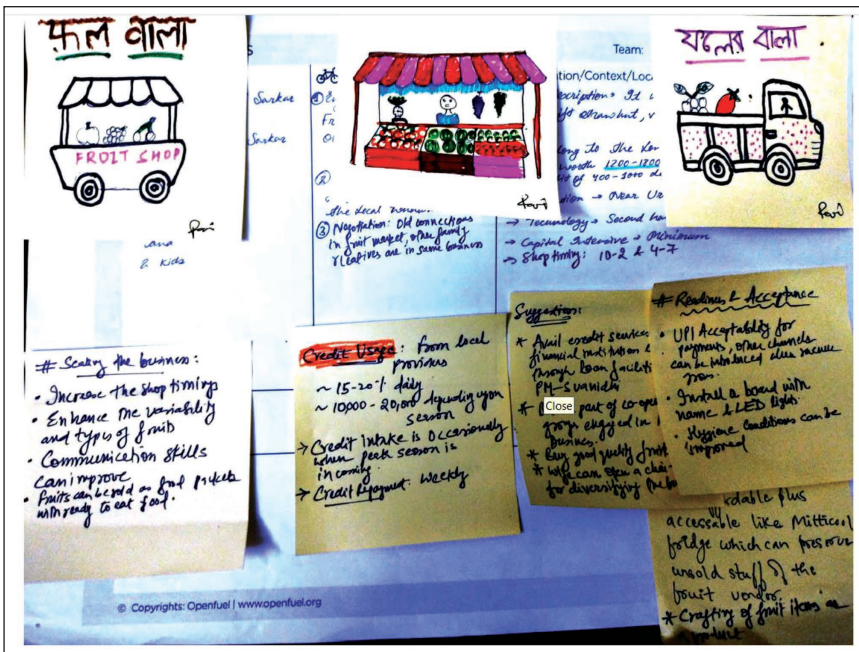


Figure A2. Business Model Canvas 3.

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References

- Acharya, S. R., & Chandra, Y. (2019). Entrepreneurship skills acquisition through education: Impact of the nurturance of knowledge, skills, and attitude on new venture creation. *International Journal of Educational and Pedagogical Sciences*, 13(2), 198–208. <https://doi.org/doi.org/10.5281/zenodo.2576932>
- Acharya S. R., & Chandra Y. (2024). *Role of technology business incubator in enhancing entrepreneurship ecosystem*. In K. Kankaew, P. Nakpathom, A. Chnitphattana, K. Pitchayadejanant, & S. Kunnapadeelert (Eds.), *Applying business intelligence and innovation to entrepreneurship* (pp. 21–34). IGI Global.
- UNFPA India (2023). (2023). *Public health care utilization by elderly in India: An analysis of major determinants from LASI Data* [Analytical Paper Series No. 7]. <https://doi.org/10.1186/s12992-020-00619-7>
- Bagdonas, E., Patašienė, I., Patašius, M., & Skvernys, V. (2010). Use of simulation and gaming to enhance entrepreneurship. *Electronics and Electrical Engineering*, 102(6), 155–158.
- Baron, R. A. (2006). Opportunity recognition as pattern recognition: How entrepreneurs “Connect the Dots” to identify new business opportunities. *Academy of Management Perspectives*, 20(1), 104–119.
- Bloom, B. S. (1994). Reflections on the development and use of the taxonomy. *Yearbook: National Society for the Study of Education*, 92(2), 1–8.
- Bloom, B. S., Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. (1956). *Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive domain*. Longman.
- Chea, A. C. (2008). Entrepreneurial venture creation: The application of pattern identification theory to the entrepreneurial opportunity-identification process. *International Journal of Business and Management*, 3(2), 37–53.
- Cope, J. (2011). Entrepreneurial learning from failure: An interpretative phenomenological analysis. *Journal of Business Venturing*, 26(6), 604–623. <https://doi.org/10.1016/J.JBUSVENT.2010.06.002>

- Dalglish, C., & Tortelli, M. (2016). Entrepreneurship at the bottom of the pyramid. *Entrepreneurship at the Bottom of the Pyramid*, 1–187. <https://doi.org/10.4324/9781315727417/ENTREPRENEURSHIP-BOTTOM-PYRAMID-CAROL-DALGLISH-MARCELLO-TONELLI>
- Dhiman, V., & Arora, M. (2024). Exploring the linkage between business incubation and entrepreneurship: Understanding trends, themes and future research agenda. *LBS Journal of Management & Research*; epub ahead-of-print. <https://doi.org/10.1108/LBSJMR-06-2023-0021>
- Elrod, J. K., & Fortenberry, J. L. (2017). The hub-and-spoke organization design: An avenue for serving patients well. *BMC Health Services Research*, 17(Suppl. 1), 457. <https://doi.org/10.1186/s12913-017-2341-x>
- Fox, J., Pittaway, L., & Uzuegbunam, I. (2018). Simulations in entrepreneurship education: Serious games and learning through play. *Entrepreneurship Education and Pedagogy*, 1(1), 61–89. <https://doi.org/10.1177/2515127417737285>
- Goi, C.-L. (2018). The use of business simulation games in teaching and learning. *Journal of Education for Business*, 94(5), 342–349.
- Gonzalez, G. E., Andres, D., Moran, S., Houde, S., He, J., Ross, S. I., Muller, M., Kunde, S., & Weisz, J. D. (2024). *Collaborative canvas: A tool for exploring LLM use in group ideation tasks*. <https://mural.co>
- Hougaard, S. (2005). *The business idea: The early stages of entrepreneurship*. Springer.
- Huebscher, J., & Lendner, C. (2010). Effects of entrepreneurship simulation game seminars on entrepreneurs' and students' learning. *Journal of Small Business & Entrepreneurship*, 23(4), 543–554.
- ILO. (2015). Mainstreaming of migration in development policy and integrating migration in the post-2015 UN development agenda. *ILO-background note: The contribution of labour migration to improved development outcomes*. https://www.ilo.org/wcmsp5/groups/public/—ed_protect/—protrav/—migrant/documents/genericdocument/wcms_220084.pdf
- Jabeur, S. B., Ballouk, H., Mefteh-Wali, S., & Omri, A. (2022). Forecasting the macrolevel determinants of entrepreneurial opportunities using artificial intelligence models. *Technological Forecasting and Social Change*, 175, 121353. <https://doi.org/10.1016/J.TECHFORE.2021.121353>
- Kotler, P., Pfoertsch, W., & Sponholz, U. (2021). The new paradigm: H2H marketing. *H2H Marketing*, 29–90. https://doi.org/10.1007/978-3-030-59531-9_2
- Lee, J. H., & Venkataraman, S. (2006). Aspirations, market offerings, and the pursuit of entrepreneurial opportunities. *Journal of Business Venturing*, 21(1), 107–123. <https://doi.org/10.1016/J.JBUSVENT.2005.01.002>
- Lumpkin, G. T., & Lichtenstein, B. B. (2005). The role of organizational learning in the opportunity–Recognition process. *Entrepreneurship Theory and Practice*, 29(4), 451–472. <https://doi.org/10.1111/J.1540-6520.2005.00093.X>
- Matlin, M. W. (2005). *Cognition* (6th ed.). John Wiley & Sons.
- Nicolopoulou, K., Karataş-Özkan, M., Vas, C., & Nouman, M. (2017). An incubation perspective on social innovation: The London Hub—a social incubator. *R and D Management*, 47(3). <https://doi.org/10.1111/radm.12179>
- Omri, H., Omri, A., & Abbassi, A. (2024). Macro-level determinants of entrepreneurial behavior and motivation. *International Entrepreneurship and Management Journal*, 1–39. <https://doi.org/10.1007/S11365-024-00990-6>
- Osterwalder, A., Pigneur, Y., & Clark, T. (2010). *Business model generation: A handbook for visionaries, game changers, and challengers*. Wiley.

- Prahalad, C. K., & Hart, S. L. (2004). *The fortune at the bottom of the pyramid*. Booz & Company.
- Prahalad, D. (2019). The new fortune at the bottom of the pyramid. *Consumer & Retail*, 94.
- Ranjan, A., & Muraleedharan, V. R. (2020). Equity and elderly health in India: Reflections from 75th Round National Sample Survey, 2017-18, amidst the COVID-19 pandemic. *Globalization and Health*, 16(1), 1–16. <https://doi.org/10.1186/S12992-020-00619-7/TABLES/7>
- Sahoo, H., Govil, D., James, K. S., & Prasad, R. D. (2021). Health issues, health care utilization and health care expenditure among elderly in India: Thematic review of literature. *Ageing and Health Research*, 1(2), 100012. <https://doi.org/10.1016/J.AHR.2021.100012>
- Senapati, A. K., & Parida, D. (2024). Labour force participation, gender equality and women's empowerment through micro-entrepreneurship: Evidence from Odisha, India. *IMB Journal of Innovation and Management*, 2(1). <https://doi.org/10.1177/ijim.231200316>
- Shane, S. A. (2003). *A general theory of entrepreneurship: The individual-opportunity nexus*. Edward Elgar Publishing.
- Shane, S. A., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217–226. <https://doi.org/10.5465/AMR.2000.2791611>
- Sharma, R., Mishra, N., & Sharma, G. (2023). India's frugal innovations: Jugaad and unconventional innovation strategies. *IMB Journal of Innovation and Management*, 1(1). <https://doi.org/10.1177/ijim.221128071>
- UNDP. (2014). *Barriers and opportunities at the base of the pyramid. The role of private sector in inclusive development*. United Nations Development Programme.
- World Poverty Clock. (2024). *India*. Federal Ministry of Economic Cooperation and Development.
- Xu, Y., & Yanag, Y. (2010). Student learning in business simulation: An empirical investigation. *Journal of Education for Business*, 85(4), 223–228.
- Yadav, V., & Goyal, P. (2015). User innovation and entrepreneurship: Case studies from rural India. *Journal of Innovation and Entrepreneurship*, 4(5). <https://doi.org/10.1186/s13731-015-0018-4>