

DESIGN THINKING FOR BUSINESS MODEL PROJECT IN ENTREPRENEURSHIP LEARNING: CASE STUDY OF FRANCHISE LEARNING

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ABSTRACT

Design thinking is a strategic concept in the current business world, although its discussion is still insufficient, especially for start-up business enterprises. The main issue in entrepreneurship learning is creating a business model project: the lack of continuity of entrepreneurship acts. It goes as far as stopping the business once the class is over. The writer wishes the use of the design thinking method can create a better business model with more extended continuity. The user integration principle as part of design thinking is expected to transform product and service creation and innovation. This paper conducts a thorough case study and offers propositions that engage the outcome of design thinking concerning business model projects to develop creativity and innovation in entrepreneurship learning, especially franchise learning. It aims to develop solutions to problems through a systematic, iterative method that invites exploration and exploitation of new ideas on business projects. The current paper analyzes various start-up business processes from college students to adopt design thinking to create products or services. This research adopts the qualitative case study method to understand design thinking practice in entrepreneurship learning, especially franchise learning. The practical implications of this paper provide a more apparent reason for entrepreneurs to adopt design thinking. Findings are presented according to the design thinking phases shown above in the Stanford Design Thinking Model: empathizing, defining, ideating, prototyping, and testing. Furthermore, it may facilitate entrepreneurship learning to incorporate design thinking as a section topic and subsequently propagate learning of design thinking in entrepreneurship learning.

Key words: Design thinking, Start-Up business, Entrepreneurship Learning, Business Model, Franchise

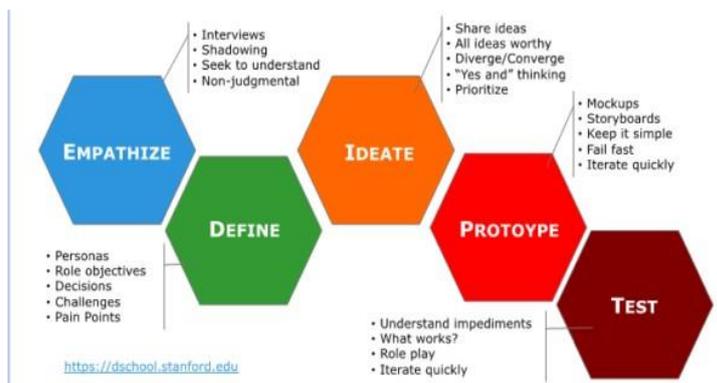
INTRODUCTION

Design thinking has been in the spotlight and practitioners in the last few years (Roth et al., 2020). The method is marketed as a tool for addressing various issues to contribute concepts by understanding customer needs and the articulating situation in envision possibilities (Liedtka, 2018), new product challenge (Deloitte, 2016; Nakata et al., 2017), and build the brand (Beverland et al., 2015). Thus, it is reasonable to expect that design thinking is an approach to build a business model, especially at the individual level, for instance, college students. Moreover, in the field of entrepreneurship learning, the learning journey is shaped by the need to bridge the gap between knowledge creation and delivery and action in transforming concepts to viable realities (Huq and Gilbert, 2017).

Acknowledging frequently seen studies of design thinking, learning and innovation, and considering learning and innovation are the popular research angles on ambidexterity; however, the relationship between design thinking and ambidexterity has not yet been widely researched. (Zheng, 2018). It helps managers manage conflicting issues such as developing brand relevance and consistency (Beverland et al., 2015). It concerns the problem in the way of thinking about “what might be” (Martin, 2010), “what ought to be” (Glen et al., 2014), or “what if” (Liedtka, 2018).

Historically, the topic goes back to the 60s, and many thinkers and contributors have been involved. In 1987, Peter Rowe of Harvard published Design Thinking; his book provided a systematic account of the process of designing in architecture and urban planning. In 1991 the design company IDEO was formed, and it showcased its design process, which drew heavily on the Stanford curriculum. It is widely accepted as one of the companies that brought Design Thinking to the mainstream. Then in 2005, Stanford’s School of Design (known as d. school) began teaching Design Thinking as a formal method.

FIGURE 1 Stanford d.school Design Thinking Process



Source : <https://dschool.stanford.edu>, 2021

In developing our idea, we distinguish between business models defined as an entity that defines how an entrepreneur exploits opportunities (Demil, Lecocq, Ricart, & Zott, 2015; Najmaei, 2014b; Zott, Amit, & Massa, 2011) and business modeling defined as the process of developing and constantly adjusting the business model (Najmaei, 2014a).

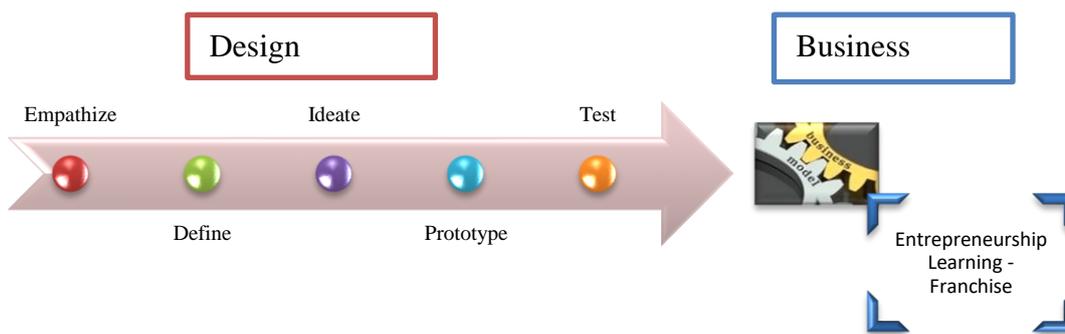
The cognitive perspective suggests that a business model is a cognitive schema, a mental representation of the reality of the business in the mind of the entrepreneur (Arend, 2013; Eckhardt, 2013; Najmaei, 2013, 2014a). Here, a business model serves as a cognitive reference point whose essential functions are to enhance information processing, reduce uncertainty, and guide entrepreneurial actions (Najmaei, 2014a). Entrepreneurs employ business models to develop descriptive accounts of what their business is, what it does and how it conducts its affairs.

This research initially arose from one of the tasks in entrepreneurship learning, especially the Franchise subjects. This course consists of fourteen face-to-face class meetings, three workshops, coaching, mentoring, paper reporting, individual paper presentation, mid-term examinations, and final semester examinations. The study design was based on a collaborative, iterative model using design thinking (Plattner, 2010; Wheatly, 2016).

This paper proposes some contributions. First, give solutions to entrepreneurship learning problem. Second, open new spaces for creativity to build a business model. Third, implement design thinking by way of exploiting new ideas of business. Fourth, employ a business model in entrepreneurship learning.

The study can be claim the first empirical study using design thinking approach for business model project in entrepreneurship learning from case study of franchise business learning. This research aims at developing solutions to problems through a systematic, iterative method that invites exploration and exploitation of new ideas through five phases: empathizing, defining, ideating, prototyping, and testing; to open new spaces for creativity that foster a deeper understanding of the problem, the audience (customers) and to identify the need for sustainable development; and. One reason why the Stanford Design Thinking Model was applied to entrepreneurship learning is that it has also been successfully applied by several businesses such as Grab Taxi, UBER, and GO- JEK.

FIGURE 2 Research Framework



In this research, the researcher discovered that the design thinking approach of vi-sualization helps individuals and teams envisage and anticipate the future especially to prevent failure or business model project in entrepreneurship learning, especially franchise subject/learning.

LITERATURE REVIEW

Design thinking Developed by Professor Rolf Faste. He was a pioneer of human-centered design and a dedicated design educator at Stanford University. framework of design thinking identify five themes, empathize, define, ideate, prototype (Carlgren et al. 2016), and test. Emphatize is the first step of design thinking which is considering the customers' perspective and incorporating them actively in the problem-solving process, user focus refers to developing a deep understanding and empathy with them (Carlgren et al., 2016 and Kolko, 2015). It is important to note that the individual trait of empathizing with users emerges at the individual level but underpins and improves the overall design thinking process outcomes at a higher level (Magalhes, 2018). The researcher used Standford approach to facilitate empathize step to gain empathy with “interview your partner” and “big deeper”. Second step of design thinking is define, this is the statement that students gong to address with their business design with “capture finding” and “take a stand with a point-of-view” process. Third step is ideate, “sketch to ideate”, “share solutions and capture feedback”, and “reflect & generate a new solution”. Fouth step is prototype, “create a physical prototype of the solution”. The students must understand that they don’t build prototype until they know what they want to learn from it and need try to learn more than one prototype (Michael.et.al, 2016). Last step is test, “share the solution and get feedback”, the students evaluated along the process and removed the risk as much as possible (Klenner, et.al, 2021).

The design thinking is a necessary prerequisite for design thinking frameworks. Design thinking is a method with mindsets to navigate uncertainty and arrive at insightful innovations (IDEO 2019). Tom Kelley and David Kelley (2013) argue for the importance of ‘creative confidence,’ defined as the freedom and courage to fail and take creative risks, as well as the knowledge that all ideas have some value. Hölzle and Rhinow (2019) show that design thinking projects allow the experiential learning process. For several reasons, design thinking is positively associated with project performance. First, user focus or immersion into the users’ experience through ethnographic tools helps to gain a better understanding of the users and their problems and needs. Second, it encourages reframing the problem into a new one.

Design thinking has gained popularity with innovation practitioners and academics alike, many of which promote design thinking as a highly relevant innovation approach (Liedtka, 2015). Managers are recommended design thinking approach in terms of procedures and interactions must be designed based on the objectives of the innovation project, in accordance with the view that design thinking has no well-defined *modus operandi*. (Magistretti, Stefano, Ardito, Lorenzo, and Messeni Petruzzelli, Antonio, 2021). Despite its practical relevance, design thinking's dissemination into scientific discourse in the field of innovation management has mostly occurred independently of other theories (Dell'Era et al., 2020).

Entrepreneurship student can improve entrepreneurial skills by design thinking to be an entrepreneur. Arash and Zahra (2016) defined different views of the entrepreneur and entrepreneurship in table below :

TABLE 1 Different Views of the Entrepreneur and Entrepreneurship

Theory	Point of Differentiation	Defining Feature of the Entrepreneur	Defining Feature of the Entrepreneurship	Purpose of Entrepreneurial Acts of the Entrepreneurs
Schumpeter	Innovation (new combination)	Innovator	Innovation in product/ process or markets	Profit from innovation
Kirzner	Opportunity discovery (alertness)	Opportunity discoverer	Exploitation of opportunities by alert-aware individuals	Profit from unrecognized opportunities that match supply with demand
Knight	Coping with uncertainty and risk	Bearer of uncertainty	Investment under uncertainty	Profit from bearing uncertainty

Teaching, like practice and research is affected by the state of theoretical development in a specific field. Design business concept is a unique capability that should be included in the entrepreneurship learning content; the question becomes “what” are the pedagogical methods that will nurture an individual’s ability to identify, develop, and manage business models not only in private firms but also in public organizations (Arash & Zahra, 2016).

We underlined the fact that public entrepreneurship is a management phenomenon (Klein et al., 2010), and the business model helps up explore the dynamism of this phenomenon. As argued by George and Bock (2011, p. 106), a “business model is not a process, but it is shaped by individual-, group-, organization, and environmental-level processes and events.” Public sector players, administrators, current and future public entrepreneurs dealing with complex institutional settings, and ambiguous policies can use business modeling as outlined here to reduce complexities involved in the provision of public goods and management of collective actions and initiate entrepreneurial projects at policy and/or institutional levels.

Doing business is a creative and continuously changing endeavor, which is affected by external and internal variables depending on the evolution of the entrepreneurial context. This dynamic landscape has nowadays become relentless, causing growing difficulties in extant business models in capturing environmental novelties. (Ernesto et al., 2016)

As stated by Rhoads (2015, p. 35), “traditional key firm characteristics such as the size and age of a firm became less critical as businesses attempted to commercialize new products, enter new markets, and serve new customers.” In other words, companies need to analyze different critical environmental and contextual variables in an innovative way for the sake of re-conceptualizing their business models. Drawing on Weinhardt et al. (2011), we thus identify four components that may conventionally be traced in business models’ instantiations:

1. *Value creation*: An analytical description of the firm’s proposition to the customer that can generate value for the business environment ; this line of reasoning should also include an analysis of the activities and actors involved and their interdependencies.
2. *Network*: An emerging stream of research is considering business networks competing among themselves and endowed with a distinctive business model. The role of each node of the network contributes to the specification of the overall value creation process.
3. *Customers*: Integrating intermediate and final customers into the business model means recognizing their participation in the delivery of the product/service and their level of integration within the activities of the firm (Afuah and Tucci, 2003).
4. *Profit*: business models are often severely discussed on the side of revenue generation, while the cost structure has been neglected in the literature until very recently.

Research on entrepreneurship learning is based mainly on a conceptual understanding of entrepreneurship and learning (Ruskovaara and Pihkala, 2013). In order to understand assessment practice as it is undertaken by educators in the field, it was argued previously that some form of typology must be developed to take into consideration different forms of learning practice. In a now well-documented typology, researchers have recently been arguing for such distinctions and have presented a typology based on four forms of entrepreneurship learning (Pittaway and Edwards, 2012). These forms are usually considered to be: “About”, “For”, “Through” and “Embedded” or “In” (Gibb, 2002; Pittaway and Cope, 2007; Handscombe et al., 2007; Pittaway, 2009).

Defining entrepreneurship learning is challenging because it is connected to both the definition of entrepreneurship and the concept of learning in many different interpretations. According to Gibb (2005), entrepreneurship learning is a question of learning for entrepreneurship, about entrepreneurship and through entrepreneurship. A conceptual schema delineates three sets of objectives for entrepreneurship learning. The first objective is to develop a broad understanding of entrepreneurship, the second is to learn to become entrepreneurial, and the third is to learn how to be an entrepreneur (Hytti and O’Gorman, 2004).

Universities that support entrepreneurship learning will experience this growth but will be confronted by the ongoing issues of providing supportive leadership and sustainable funding. Financial support for a campus program typically comes from students enrolled in courses, but in campus-wide entrepreneurship programs, these may be double-counted between the individual school or college and the university entrepreneurship office (Antal et al., 2014).

The vocational development of teachers is based on their values of being able to reflect on their own modus operandi as a teacher and have the potential to develop their teaching methods and thus develop as a teacher. We think this kind of potential and motivation could be beneficial, particularly in the teaching profession (Rönkkö and Lepistö, 2015). This means that business models are powerful tools that can be adopted to understand, analyze and develop an organized set of strategic actions (George and Bock, 2011). In line with Zott et al. (2011), who affirm that “business models emphasize a system-level, holistic approach to explaining how firms ‘do business,’” Pisano, Ferrari, and Fasone link the concept of business model to the managerial literature on territory governance and networks.

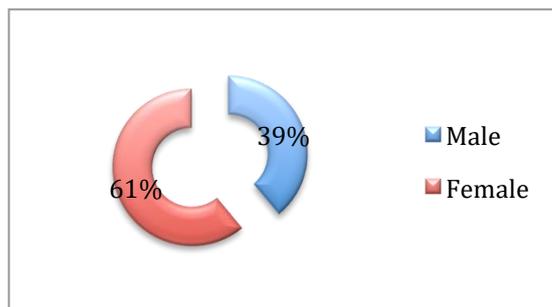
RESEARCH METHODOLOGY

In this study, we wanted to understand the impact/uses of the design thinking method on the implementation and development of a business model in entrepreneurship learning. In Patton's (1990) view, all types of sampling in qualitative research may be encompassed as purposeful sampling. To realize our research goal, we adopted a qualitative multiple-case study approach.

Partners in this study ("Respondents") represent the concept of design thinking in entrepreneurship learning in many different interpretations. We collected data from 43 college students of the franchise learning of the study program in Company Management of Parahyangan Catholic University, Bandung, Indonesia. Students were assigned a team project to create a business model.

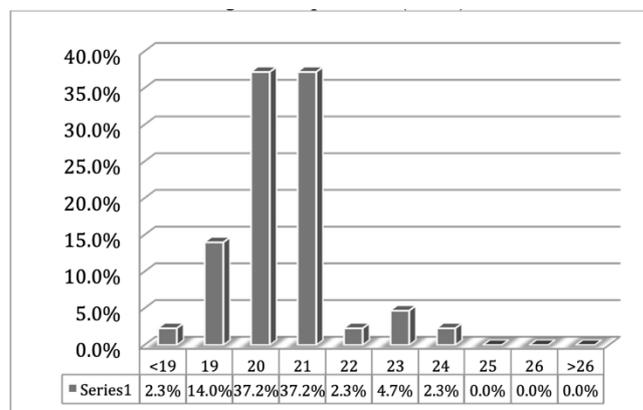
In this research, the gender of the respondents can be seen in Figure 3 below :

FIGURE 3 Gender of Respondents



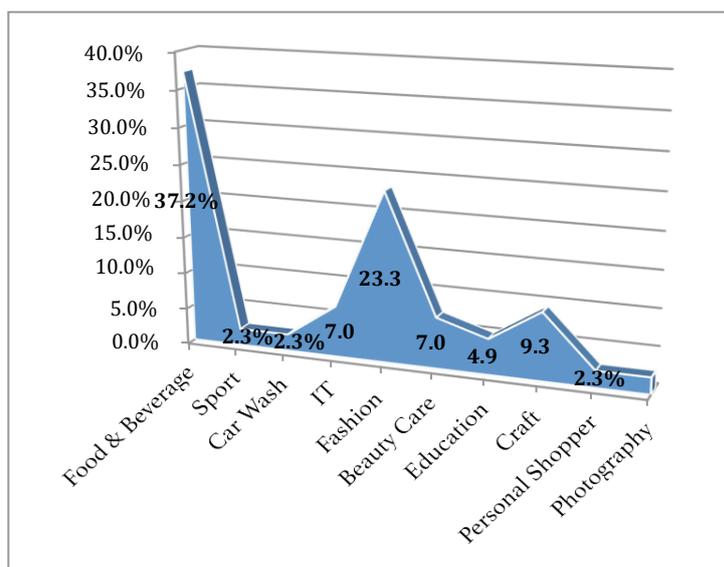
In this research, the age of the respondents can be seen in Figure 4 below :

FIGURE 4 Age of Respondents (Years)



The results of the assignments from college students are several business fields, mainly in the food, beverage, and fashion sectors which can be seen in Figure 5 below:

FIGURE 5 Business Field of Respondents



Content Validation Steps

The process of content validation involves the following steps (Pandey and Chawla, 2016):

1. Reviewing of the background literature to identify existing construct dimensions and definitions of design thinking and entrepreneurship learning as well.
2. Conducting semi-structured and focus group discussions with members of the franchise students, entrepreneurship lecturer, franchisor and franchisee.
3. Coding, operationalization of constructs, and identification of design thinking and entrepreneurship learning items.

To ensure that all relevant facets of a participant's constructed reality were explored, the researchers made sure that the following main questions were addressed at some point during the interview, without disrupting its flow:

- Q1 : What are the benefits and uses of the Stanford Design Thinking increasing business model in entrepreneurship learning, especially in franchise leaning?
- Q2 : What are the benefits and uses of “Empathizing” in creating business model in entrepreneurship learning, especially in franchise leaning?
- Q3 : What are the benefits and uses of “Defining” in creating business model in entrepreneurship learning, especially in franchise leaning?
- Q4 : What are the benefits and uses of “Ideating” in creating business model in entrepreneurship learning, especially in franchise leaning?
- Q5 : What are the benefits and uses of “Prototyping” in creating business model in entrepreneurship learning, especially in franchise leaning?
- Q6 : What are the benefits, and uses of “Testing” in creating business model in entrepreneurship learning, especially in franchise leaning?

The design thinking phase is used to guide the collection of exploration data during entrepreneurship learning, especially the Franchise learning for half a semester.

FINDINGS

Design Thinking

Findings are presented according to each of the design thinking phases presented above in the Stanford Design Thinking Model: empathizing, defining, ideating, prototyping, and testing. The results presented herein, therefore, reflect a general order of events during the half-semester of the project. Design thinking is a methodology for creative problem-solving. The lecturers used it to inform their own teaching practice or a framework for real-world projects to the college students in class. This gives educators interested in teaching Design Thinking the first taste of challenges they might run.

Prior to the Stanford Design Thinking Model, students will usually do business directly focused on creating products first without finding out what consumers really need for the product to be created. All respondents have agreed that the Design Thinking concepts are essential and valuable in starting a business model in entrepreneurship learning, especially in the Franchise course. The benefits can be seen in Figure 6 below:

FIGURE 6 The Uses of Stanford Design Thinking in Entrepreneurship Learning



Phase 1: Empathize

As for the first step, college students have to acquire an empathic understanding of the problem they wish to solve. At this stage, an approach is taken to their customers to find out exactly what they want. The intent during this phase is to observe, listen and engage with the context or problem of interest. During this phase, we collected data using the satisfaction of the Design Thinking topic for a business model in entrepreneurship learning, especially in the Franchise course by questionnaire and the in-depth interview protocol:

- a. Empathizing is a complex affective and cognitive response to other people's emotional distress. Empathy includes the ability to feel the emotional state of others, feel sympathetic and try to solve problems, and take the perspective of others.
- b. At this stage, students create a questionnaire and conduct interviews with prospective customers to find out "Needs" or "Expectations."

Information that has been collected during the Empathizing phase both from questionnaires and interviews is analyzed and verified to determine the core problems to be identified. This defining phase will be beneficial to the process of resolving customer problems because the problem has been defined. The one-hour interviews were conducted a minimum of two times each based on an open-ended structure. Among the questions that the college students asked were: "Describe your business," "What are the customer wants/needs/ expectations of the product offered by the college students' business?"

The uses of "Empathizing" from Stanford's Design Thinking in entrepreneurship learning, especially in the Franchise subject, as seen in Figure 7 below:

FIGURE 7 Uses of “Empathizing” in Entrepreneurship Learning

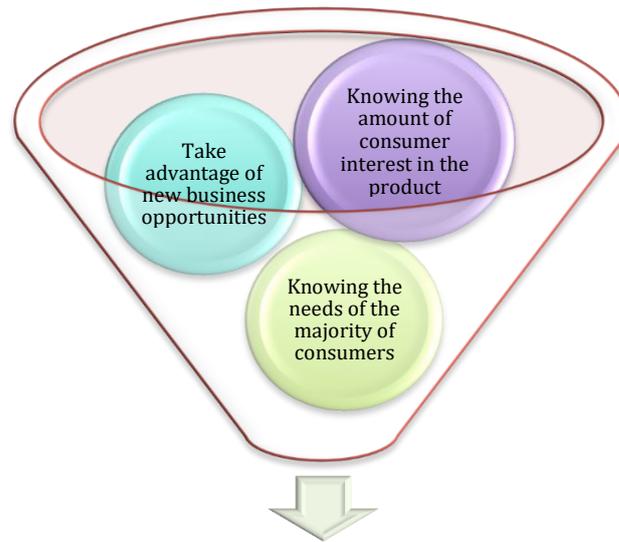


Phase 2: Define

The second phase involves framing the problem by synthesizing what is understood and observed during stage 1. This phase also concludes/reconciles the problem by synthesizing observations of (prospective) consumer needs by carrying out data collection on Questionnaire and Interviews (up to in-depth interviews). Detailed data collection can be in the form of a pie chart or another table. This defining phase will be helpful to solve consumer problems because the problem has already been determined.

The uses of "Defining" derived from Stanford's Design Thinking in entrepreneurship learning (especially in the Franchise subject) can be seen in Figure 8 below:

FIGURE 8 The Uses of “Defining” in Entrepreneurship Learning



Phase 3: Ideate

The third phase involves developing a solution that will be tested based on the conclusions of the (prospective) consumer's needs at the "defining" stage before. All ideas will be accommodated to the process of resolving the problems that have been set. This Ideating Stage may not be the same as the initial idea of the business you want because it has considered the results of evaluating the needs of consumers, even though this could be a new idea or joint idea.

The uses of “Ideating” from Stanford’s Design Thinking in entrepreneurship learning especially in the Franchise subject can be seen in Figure 9 below:

FIGURE 9 The Uses of “Ideating” in Entrepreneurship Learning



Paper Assignment : college students applied a business analysis observation protocol to identify behaviors, attitudes and stories that they observed among the consumers.

Presentation : college students explored the ideas as a method to identify strengths and weaknesses in business model ideas.

Coaching activity : each college student as a coachee will be accompanied by a coach to explore the potential of business people, not to direct their business model ideas.

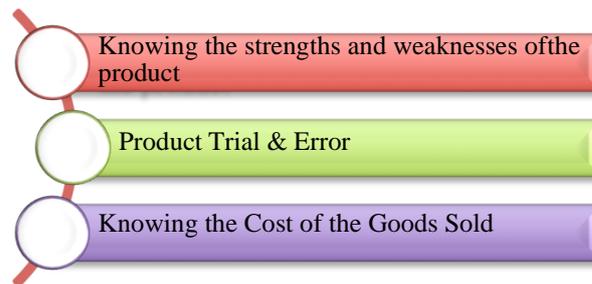
Mentoring activity : the mentor inspires college students in planning and guiding the ideas of business model.

Phase 4: Prototype

At this stage, some product versions will be produced (both goods and services) or special features found in the product so that they can investigate the solution to the problem arising at the previous stage. This prototype can be tested on its own, on the mentor/coach, or on several other people. When there are input, necessary improvements/repairs are made on this prototype so that an excellent final prototype is produced.

The uses of “Prototyping” derived from Stanford’s Design Thinking in entrepreneurship learning especially in the Franchise subject can be seen in Figure 10 below:

FIGURE 10 The Uses of “Prototyping” in Entrepreneurship Learning

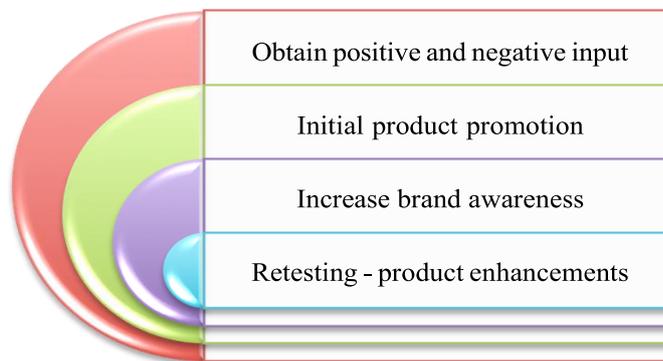


Phase 5: Test

Conducting testing and evaluation of products among the public/prospective consumers/mentors/ lecturers, which results will lead to changes and improvements to get rid of standard solutions to the problem and arrive at a deep understanding of the products and users.

The uses of “Testing” derived from Stanford’s Design Thinking in entrepreneurship learning especially in the Franchise subject can be seen in Figure 11 below:

FIGURE 11 The Uses of “Testing” in Entrepreneurship Learning



Design Thinking is not only suitable for the goods or services involving a product, but may also suit systems. This research might involve a change in curriculum, teaching methods, use of knowledge, teaching style, teacher-student relations, and assessment.

DISCUSSION

The research outcome has shown that design thinking has been extremely beneficial in creating innovative ideas and creativity, especially in creating a structured and well-planned business model within entrepreneurship learning in the franchise course. Thus, students were able to solve the problem in entrepreneurship learning. The main benefit of the empathize stage is that franchise course students no longer design business models based on what they like/wish but on what consumers need and want through the in-depth interview so that they were able to identify consumers' characteristics and market opportunities. Supported by the define stage, the benefits garnered is to create a point of view based on the empathize stage result, especially in summing up the majority of consumer needs and interests.

The ideate process in design thinking within franchise learning is usually different from initial ideas generated by students. These new ideas are felt to be able to solve the problem and be more creative and innovative. The prototype, an implementation of the ideate stage, helps identify the strengths and weaknesses of a product, both goods, and services through trial and error. Product evaluation is conducted within the test stage implemented to lecturers/mentors/potential customers to improve product value after receiving positive and negative feedback.

Most of student stated that learning Design Thinking in entrepreneurship learning on campus could be easily understood because it makes use of examples that have been practiced so that we can understand them properly.

Suggestions from college students can be found below:

1. Spend more time so that business ideas can be more mature and ready to be realized;
2. Mentors who accompany must be able to understand more about the business;
3. Make groups (2-3 people) to save more time. Besides, if someone was forced because of value, she/he can enjoy a bonus/incentive for working overtime and enjoying doing business.

The Benefits and Importance Ranking of the Business model Creation Process in Entrepreneurship Learning from college students can be seen in Table 2 below :

TABLE 2 Benefits and Importance Ranking of the Business model Creation Process in Entrepreneurship Learning

Item	Useful/ Useless	Aim	Rank
Design Thinking	Useful / Important	Business model Creation Process in Entrepreneurship Learning	-
Empathizing			3
Defining			5
Ideating			1
Prototyping			2
Testing			4

LIMITATION AND FUTURE RESEARCH

It is always hard for researchers to make generalizations when the sample size is small. Therefore, this particular research, while analyzing design thinking for business model in entrepreneurship learning, on one hand, opens up space for further research into other subjects on the other. In fact, we are even concerned that our findings may be case specific. Although this omission is a result of the specific aim of the study, which focuses on entrepreneurship learning processes that promote and result in adopting design thinking, further research about the role of design thinking in creating services or products would enrich our understanding about design thinking in the context of business model in entrepreneurship learning. Thus, the current research opens up space for further research on a number of counts. The routes to be taken include understanding:

- a. how product or service prototyping is carried out by social entrepreneurs;
- b. how design thinking maximizes the business sustainability; and
- c. the benefits of design thinking not only for the starting-up entrepreneur but the existing entrepreneur as well.

REFERENCES

Afuah, A. & Tucci, C. (2003), *Internet Business Models and Strategies*, McGraw-Hill, Boston, MA

Antal, N., Kingma, B., Moore, D., & Streeter, D. (2014). University-Wide Entrepreneurship Learning *In Innovative Pathways for University Entrepreneurship in the 21st Century*. Published online: 07 Oct 2014; 227-254.

Arash, N., & Zahra, S. (2016). Toward a Theory of Business Models and Business Modelingin Public Entrepreneurship *In New Perspectives on Research, Policy & Practice in Public Entrepreneurship*. pp.77-102.

Arend, R. J. (2013). The business model: Present and future—beyond a skeuomorph. *Strategic Organization*, 11(4), pp. 390–402.

Carlgren, Lisa, Ingo Rauth, and Maria Elmquist. 2016b. “Framing Design Thinking: The Concept in Idea and Enactment.” *Creativity and Innovation Management* 25 (1): 38– 57.

Dan-Ling, Z. (2018). Design thinking is ambidextrous. *Management Decision*, Vol. 56 Issue: 4,pp.736-756

Dell’Era, C., Stefano, M., Cabirio, C., Roberto, V., & Francesco, Z. (2020). “Four Kinds of Design Thinking: From Ideating to Making, Engaging, and Criticizing.” *Creativity and Innovation Management* 29 (2): 324– 44

Deloitte. (2016). Global human capital trends 2016 (p. 112). Deloitte University Press. <http://www2.deloitte.com/us/en/pages/human-capital/articles/employee-engagement-culture-human-capital-trends-2015.html>

Demil, B., Lecocq, X., Ricart, J. E., & Zott, C. (2015). Introduction to the SEJ special issue on business models: Business models within the domain of strategic entrepreneurship. *Strategic Entrepreneurship Journal*, 9(1), pp. 1–11.

Eckhardt, J. T. (2013). Opportunities in business model research. *Strategic Organization*, 11(4), pp.412_417.

George, G., & Bock, A. J. (2011). The business model in practice and its implications for entrepreneurship research. *Entrepreneurship Theory and Practice*, 35(1), pp. 83_111.

Gibb, A. (2002). In pursuit of a new enterprise and entrepreneurship paradigm for learning: creative destruction, new values, new ways of doing things and new combinations of knowledge. *International Journal of Management Reviews*, Vol. 4 No. 3, pp. 213-32.

Gibb, A. A. (2005). Towards the entrepreneurial university: Entrepreneurship education as a Lever for Change. National Council for Graduate Entrepreneurship. www.ncge.org.uk

Glen, R., Christy, S., & Christopher, B. 2014. “The Need for Design Thinking in Business Schools.” *Academy of Management Learning & Education* 13 (4): 653– 67.

Handsombe, R., Kothari, S., Rodriguez-Falcon, E. & Patterso, E. (2007). Embedding enterprise in science and engineering departments, Working Paper No. 025/2007, National Council for Graduate Entrepreneurship (NCGE), Birmingham.

Hölzle, K., & Rhinow, H. (2019). The dilemmas of design thinking in innovation projects. *Project Management Journal*, 50, 418–430.

Huq, A., & Gilbert, D. (2017). All the world’s a stage : transforming entrepreneurship learning through design thinking. *Learning + Training Emerald Journal*. Vol 59 No. 2, pp 155-170.

Hytti, U. & O’Gorman, C. (2004). What is enterprise learning? An analysis of the objectives and methods of enterprise learning programs in four European countries. *Learning and Training Journal*, Vol. 46 No. 1, pp. 11-23.

IDEO. (2019). Design thinking defined. Retrieved May 20, 2019, from IDEO website: <https://des.ignthinking.ideo.com/>.

- Kelley, T., & Kelley, D. (2013). *Creative confidence: Unleashing the creative potential within us all*. New York, NY: Random House
- Klein, P. G., Mahoney, J. T., McGahan, A. M., & Pitelis, C. N. (2010). Toward a theory of public entrepreneurship. *European Management Review*, 7(1), pp. 1-15. lever for change. National Council for Graduate Entrepreneurship, Policy Paper.
- Klenner, N. F, Gerda, G, & Ingo, O. K. (2021). "Entrepreneurial Ways of Designing and Designerly Ways of Entrepreneurship: Exploring the Relationship Between Design Thinking and Effectuation Theory." *Journal of Product Innovation Management* 00: 1– 29.
- Kolko, J. (2015). Design thinking comes of age. *Harvard Business Review*
- Liedtka, J. (2015). "Perspective: Linking Design Thinking with Innovation Outcomes Through Cognitive Bias Reduction." *Journal of Product Innovation Management* 32 (6): 925– 38.
- _____. (2018b). Why design thinking works. *Harvard Business Review*, 96(5) pp 72-79. Retrieved from <https://hbr.org/2018/09/why-design-thinking-works>
- Magalhães, R. (2018). "Human-Centred Organization Design." *The Design Journal* 21 (2): 227– 46.
- Magistretti, S., Ardito, L., & Messeni, P. A. (2021). "Framing the Microfoundations of Design Thinking as a Dynamic Capability for Innovation: Reconciling Theory and Practice." *Journal of Product Innovation Management* 00: 1– 23.
- Martin, M. (2010) 'The European Union in the Democratic Republic of Congo – a Force for Good?' in M. Martin and M. Kaldor (eds), *The European Union and Human Security: External Interventions and Missions*. London: Routledge Studies in Human Security, pp. 55–75
- Michael G. L., Scott, K. S., Abbie, G. (2016). *Design Thinking: New Product Development Essentials from the PDMA*. John Wiley & Sons Inc.
- Najmaei, A. (2014a). A behavioral view of business modeling. In T. K. Das (Ed.), *Behavioral strategy : Emerging perspectives* (pp. 177_203). Charlotte, NC: IAP.
- Najmaei, A. (2014b). Business model value creation, value capture, and information technologies. In M. Khosrow-Pour (Ed.), *Encyclopedia of information science and technology* (3rd ed., pp. 549_557). Hershey PA: IGI Global.
- Nakata, C., Rubera, G., Im, S., Pae, J.H., Lee, H.J., Onzo, N & Park, H. (2017). New product creativity antecedents and consequences: Evidence from South Korea, Japan and China. *Journal of Product Innovation Management*, 35(6), 939–959 NCGE, Birmingham
- Nito, E. D., Paolo, C., Gianluigi, M., Karim, M. (2016). Revisiting business models: contributions from the field. *Measuring Business Excellence Journal*, Vol. 20 Issue: 4, pp.1- 9
- Pandey, S. & Chawla, D. (2016). Qualitative Market Research: *An International Journal* Vol. 19 No. 3, pp. 339-356
- Patton, M.Q. (1990). *Qualitative Evaluation and Research Methods*, 2nd ed., Sage, Newbury Park, CA
- Pittaway, L. and Cope, J. (2007). Simulating entrepreneurial learning: assessing the utility of experiential learning designs. *Management Learning Journal*, Vol. 38 No. 2, pp. 211-33.
- Pittaway, L., Hannon, P., Gibb, A. and Thompson, J. (2009). Assessment practice in enterprise learning, *International Journal of Entrepreneurial Behaviour and Research*. Vol. 15 No. 1, pp. 71-93.
- Pittaway, L. & Edwards, C. (2012). Assessment: examining practice in entrepreneurship learning. *Learning + Training Journal*, Vol. 54 Issue: 8/9, pp.778-800
- Plattner, H. (2010), *An Introduction to Design Thinking Process Guide*, Stanford Design School
- Rhoads, K. (2015). Understanding the gestalt nature of business models: a business model review. *Journal of Management and Strategy*, Vol. 26 No. 4.
- Rönkkö, M-L. & Lepistö, J. (2015). Finnish student teachers' critical conceptions of entrepreneurship learning. *Journal of Enterprising Communities: People and Places in the Global Economy*. Vol. 9 Issue: 1, pp. 61-75
- Roth K, Globocnik D, Rau C, Neyer A-K. (2020). Living up to the expectations: The effect of design thinking on project success. *Creativity and Innovation Management*, pp. 667-684. <https://doi.org/10.1111/caim.12408>
- Ruskovaara, Elena and Pihkala, Timo. (2013). Teachers implementing entrepreneurship learning: classroom practices. *Learning + Training Journal*. Vol. 55 Issue: 2, pp.204-216
- Weinhardt, C., Blau, B., Conte, T., Filipova-Neumann, L., Meinel, T. and Michalk, W. (2011). *Business Aspects of Web Services*, Springer, London.
- Wheatly, M.D. (2016), "Design thinking: taking a product to market", Webinar downloaded September 18
- Zott, C., Amit, R and Massa. (2011). The business model: recent developments and future research. *Journal of Management*, Vol. 37 No. 4, pp. 1019-1042.