

Research Paper

A Conceptual Model of the Social Entrepreneurship Design Thinking for University Students

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ORCIDShahrul Nizam Mohamad Razali: <https://orcid.org/0000-0001-8091-8775>**Abstract.**

The knowledge-building of social entrepreneurs often depends on self-will, especially in terms of knowledge, skills, creativity, and innovation. Proper planning and design development are the main pillars that help social entrepreneurs to continue to progress and be competitive. Design thinking helps in the production of creative ideas before the implementation of the mission of social entrepreneurship, which in turn contributes to change and increases the social value of society. This article aims to discuss the social entrepreneurship design thinking model of public university students in the production of more efficient and impactful social entrepreneurship behavior. The author uses a literature review approach to obtain relevant concepts and theories before developing a structured modeling framework to be tested in the study. A number of public university students in Peninsular Malaysia were selected to be respondents for this study. This study only unravels the importance of the development of design thinking for university students and no numerical data needs to be analyzed. The contribution of the study gives a positive impact and innovative value to the field of entrepreneurship, the academic sector, and local universities. This study is expected to contribute in building awareness of adapting design thinking to the social entrepreneurship of public university students in the generation of product ideation as well as community social mission activities in achieving the objective as a social entrepreneur who brings impact to the development of the country and human civilization.

Keywords: design thinking, innovation, public universities, social entrepreneurship, students

1. Introduction

At the global level, some of the world's leading brands, such as Google, Samsung, Ford and Apple, have earlier used the design thinking approach in some product designs (Rikke & Teo, 2020). In fact, the subject of design thinking is taught at top universities around the world, including Stanford, Harvard and MIT. Design thinking is an iterative process in which creators seek to understand the user, respond to assumptions, and redefine the problem in an effort to identify alternative strategies and solutions that may not be immediately apparent during the initial problem understanding phase. At the

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same time, design thinking provides a solution-based approach to solving problems. It is a way of thinking and working and a collection of methods directly on a result. The importance of design thinking especially in the development of inventions is seen to be able to increase creativity and innovation of products or services in solving a problem faced. The implementation of the approach and application with the integration of design elements gives a good effect on the final production of a product and action. In fact, according to UNESCO 2030, creativity and innovation are also used as the key to sustainable development (United Nations Education Science and Culture Organization 2016) which requires major changes in the economy, technology and society due to the emergence of the digital economy which includes innovation skills, creativity and creativity which needs to be dealt with efficiently (Athanasios & Vasiliki, 2019). Through observation, synthesis, alternatives, critical thinking, feedback, visual presentation, creativity, problem solving and value creation, creators can use design thinking to identify unique venture opportunities.

Social entrepreneurship is a model of entrepreneurship that is not only concerned with profit but emphasizes on creating a society and civilization that has a positive and balanced impact. Social entrepreneurship is also an innovative approach towards the goal of transforming society socially. Although it is still new among the general public, it is gaining attention and interest among university students all over the world (Litzky et al. 2010). Social entrepreneurs are actually individuals who have vibrant and fresh ideas for innovative solutions to social problems that are often faced by the general public. A social entrepreneur will always take whatever opportunities and opportunities are open, which are not noticed by other individuals, to improve the existing system in the community, inspire new approaches and also think of new solutions to improve the standard of the surrounding community. Social entrepreneurs also have a social mission. Wealth or profit is not the main objective but instead they will be more concerned with the actual final achievement and impact on the social mission. Today's entrepreneurs need to find a difference in the innovation of a unique branding for the sake of business continuity. With the uniqueness of the result of the innovation, it highlights the way of thinking of an entrepreneur that coincides with the characteristics of entrepreneurship. Through a creative thinking process and innovation, the product or service marketed can reach further.

Thus, this study was conducted to test the influence of design thinking on the social entrepreneurship of public university students, identify the level of design thinking based on demographic factors and identify differences in the level of social entrepreneurship of public university students based on demographic factors.

2. Problem Statement

The use and application of the concept of social entrepreneurship in Malaysia is relatively new in the business world, especially for students at the public university level. Social entrepreneurship with elements of sociality, innovation and market orientation is very important to be cultivated in all public university students in Malaysia taking into account the period of their involvement. This is due to their active involvement able to boost students' innovation power in addition to inculcating them with altruistic values towards society (Hariyaty et. al, 2016). Accordingly, the noble efforts made by various parties in both the government and private sectors to cultivate social entrepreneurship education need to be expanded and given recognition as it has been proven that students who follow social entrepreneurship programs are able to exhibit an exciting level of social entrepreneurship in their business fields. This means that the subject of social entrepreneurship should be held as the main option and emphasis should be placed on the benefits obtained if applying it in the core of business.

The social impact clash is growing among entrepreneurs. More and more start-ups are taking the form of social enterprises, where their business is built around a social mission. According to the British Council, it is estimated that there are more than 20,000 social enterprises in Malaysia. In the UK, research states that there are around 100,000 social enterprises that contribute £60 billion to the UK economy and employ 2 million people. Overall, social enterprises are estimated to be worth around 3% of the UK's gross domestic product and 5% of all jobs. Locally, the social enterprise sector is said to be vibrant and growing. But the awareness and understanding of social enterprise still has a long way to go. Based on local research, the age group of 31 to 40 years is the biggest contributor to the percentage of social entrepreneurs based on age in Malaysia. The age level for university students is only 7% and it is still too low. Graduates do not get information and information regarding what is said with social entrepreneurship. At the age of over 30 years and above only aware of the existence of this social entrepreneur concept. After five years of implementing the IPT Entrepreneurship Development Policy and various initiatives under the IPT Entrepreneurship Strategic Plan 2013-2015, the sensitivity and acceptance of local IPTs towards the importance and agenda of entrepreneurship education has been successfully improved. This is proven by the increase in the level of involvement and participation of students in IPT entrepreneurship programs and activities which showed a significant increase from less than 20% in 2011 to more than 50% in 2015. Likewise with the concept of social entrepreneurship, the involvement of public university students on

this approach is getting more and more attention and many knowledge and awareness programs are being actively implemented by the government and universities. This increase is in line with the data reported by the MPC in the 2015 Malaysian Higher Education Institution Entrepreneurship Education Study as shown in Figure 1.2, where the number of business registrations at the Companies Commission of Malaysia (SSM) by Malaysian residents aged between 23 and 26 years has increased significantly consistent for the period 2010 to 2014.

With regard to the design thinking approach, there are many variations of the design thinking process used today consisting of three to seven phases, levels or modes. However, all variations of design thinking are pretty much the same. All variations of design thinking include the same principles explained by the Nobel prize winner - Herbert Simon in 'The Sciences of the Artificial' in 1969. In this study, the researcher will focus on the five-phase model proposed by the Hasso Design Institute -Plattner at Stanford, also known as the D. School. The five (5) phases of Design Thinking, according to D. School are empathy, definition, ideation, prototyping and testing.

Design thinking is often referred to as thinking 'outside the box', as designers seek to develop new ways of thinking that do not conform to dominant or more common problem-solving methods. The essence of design thinking is the intention to improve the product by analyzing and understanding how users interact with the product or service and studying the conditions of how to operate. The content of design thinking is also closely related to the interest and ability to pose challenging questions and assumptions. One of the elements of thinking outside the box is to falsify previous assumptions – that is, to make it possible to prove whether they are valid or not. After questioning and refining the state of the problem, the solution generation process will help in generating ideas that reflect the constraints and real aspects of the problem faced. Design thinking gives its users the opportunity to delve deeper into the situation being explored; it helps produce an accurate research, make prototypes, test products and services so that new methods can be found to improve products or services.

It can be concluded that the application of design thinking before producing and implementing a product and service provides many benefits. The same is the case with the initial application to public university students in Malaysia in developing activities with the concept of social entrepreneurship.

Demographic factors also play a role in impacting the final success of social entrepreneurship. Some related elements such as gender factors, number of years of business experience and level of education indirectly lead to changes in the approach to design thinking and social entrepreneurship. In general, researchers in the field

of design thinking and creativity have tried to identify the factors that influence the development of these two elements. In most literature, the gender factor has an impact or effect on the development of a student's creativity. This clearly shows that social care can not only exist by itself, rather it requires some environmental factor to encourage an individual to become someone who is geared towards the mission of social entrepreneurship. Most of the studies on social entrepreneurship, whether foreign or domestic, are all focused on business entrepreneurs. Likewise with the adaptation of design thinking in producing a product and service. Are they a creative person in achieving the objectives of social entrepreneurship and if they are creative, what are the factors that drive that creativity? Is there an effect of business experience and education level that can pattern social mission actions well and effectively? Accordingly, the researcher took the initiative in developing a design thinking model for student social entrepreneurship by looking at the impact of demographic factors. With this, some of the previous problems can be unravelled towards the development of human capital that brings more benefits and innovation.

3. Design Thinking

The concept of design thinking in this study is a combined approach of practical-creative elements that can be applied to solve problems in several business sectors, especially for the purpose of developing products and expanding the services offered to users. Incorporating design thinking into the innovation process helps create additional forms of value. Therefore, the idea evaluation process helps companies improve performance to be more sustainable (Martin et al. 2016). All these interact in a complete cycle based on the collective development of the project in cooperation. The main recommendation of this design development model is to find revolutionary or innovative solutions for all identified problems by focusing on the needs of social entrepreneurship. The definition and concept of design thinking was developed and created by Rolf Faste who is a professor at Stanford University in the United States. However, the idea was popularized by the founder of IDEO, David M. Kelley, which is one of the largest design and innovation companies to date (Maria, 2016). Unlike other development models, design thinking is not only based on statistical and mathematical data in each process it goes through (cycle) but it is also focused on empirical observation and on direct contact with customers and other professionals responsible for each phase in project development process (Linton & Klinton, 2019).

In other words, design thinking can be considered a more “human” duplication than others by going through the 5 process elements found in it, namely empathy, definition, ideation, prototyping and testing.

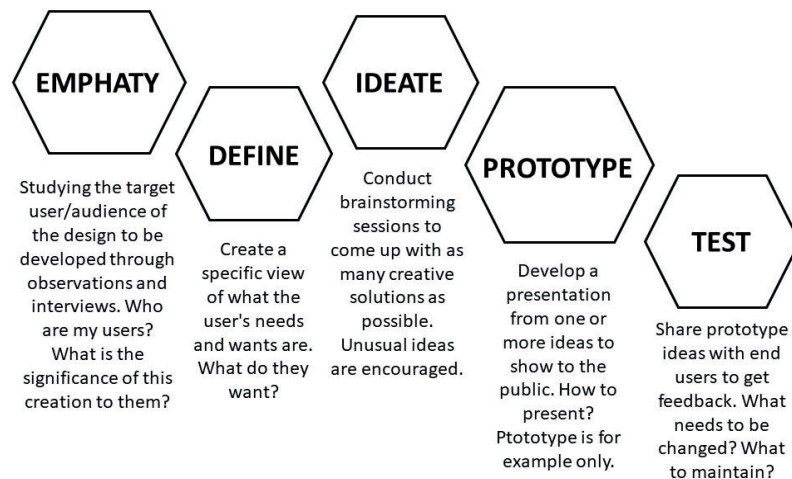


Figure 1: Elements of Design Thinking.

3.1. Empathy - have the value of empathy with the target user.

This element is a process of assessing the level of appropriateness of empathic values towards the purpose of developing a particular project or an assessment of the extent to which the designer can feel the will of the target user. In this study, the evaluation of empathy was studied on university students to see the extent to which these values affect the achievement of social entrepreneurship that they apply to the implementation of activities that will be carried out.

3.2. Definition - user needs, user problems and solution provider views.

This element is the phase where the designer makes detailed research and evaluation of every need and problem faced by the user based on the element of empathy. The designer or even the solution provider will present a comprehensive view after the request or requirement is defined together with the participating team. In this study, the definition will show the extent to which university students act in understanding the types of problems involved.

3.3. Ideation - generate assumptions and create ideas for innovative solutions.

This element is the phase where the idea generation process is done after the definition of the problem is identified. In this study, it can be seen how university students show action towards the solution and contribution of an idea before developing the final solution and solution for the target user.

3.4. Prototype - develop a prototype to start creating the solution.

This element of design thinking is used in this study to see how the actions of university students react to the solutions that have been identified to be implemented. Are they comfortable developing a prototype first before making any action implementations or vice versa. It is also used to see if university students are comfortable developing a prototype based on the identified solution actions or just using theory alone.

3.5. Test - run a test before the solution process.

This element is the last phase in the design thinking process and is used in this study to see the results of university students' acceptance of the target user's feedback on the solutions that have been provided. Aiming for resource exploration in improving new ideas for the future.

When the entire process is completed in the design thinking phase, the result on the final product will not stop there because it will go through the improvement phase and go through the continuous evolution process. It also depends on the results of the final observation and the need for any changes for the target user. Although there are some basic steps that need to be followed to obtain the final result, there is no fixed order of hierarchy between the phases in the development process. Each element in the design thinking process constantly moves and interacts with each other in an effort to improve the next result through a series of experiments from end user feedback (Dijksterhuis & Silvius, 2017).

4. Demographic Factors

Demographic factors for this study consist of three elements namely gender, experience and education. There is a debate among economists who want to speculate that

entrepreneurial skills come from hereditary and genetic factors or through the process of education and experience (Zaidi Fadzil, 2013). The business environment is also seen to include several external elements which are factors found in individuals such as gender, length of experience and level of education. External factors that are around individuals can contribute to the potential desire for entrepreneurial behaviour as well as lead to the production of business ideas. The three elements of the demographic factors found in this study were selected following aspects of importance to represent different holistic perspectives that include the value of the gender, experience level and education level of a student. Each of these factors has its own impact and value on a study. Through this approach, the distribution of the data obtained will be more detailed and descriptively valued. Finally, the study will bring more meaning and the production of output that is easy to draw conclusions.

5. Social Entrepreneurship

Entrepreneurial intention is the main topic in the field of entrepreneurship studies. It continues to be a topic of knowledge that continues to grow and requires further study in an effort to drive improvement towards a stronger understanding of the expectations of entrepreneurs (H.M Kamrul Hassan, 2020). Successful social entrepreneurship can make a positive contribution to society. In order to produce optimal output in doing social entrepreneurship, the use of innovative project design methods enables the achievement of the goals of social entrepreneurs as planned. Social entrepreneurship is a model of entrepreneurship that is not only concerned with the value of a profit, but rather emphasizes the desire to create a society that has a positive and fair impact (Suraiya & Ahmad, 2015). The value of social entrepreneurship of public university students in enterprise programs that are implemented for free is found to be in high demand (Norasmah & Hariyaty, 2014).

However, personal characteristics as a social entrepreneur still need to be polished because they are still at a moderate level. University students have a bright opportunity to become a social entrepreneur in today's modern and technological era. This is because those groups have a tendency to try something new and have the potential to become a leader in the future. The opportunity for university students to venture into this field is always open given that they have an extensive network between the community (through interaction during the study year), fresh thinking and are good at taking opportunities to improve their own potential as an entrepreneur. Social entrepreneurs have a social mission towards the environment. Luxury or a large profit value is not

the main mission, but they will be more concerned with the achievements obtained and the impact on what is implemented through their respective social missions. The study of Carlos, Hannah, Arifusalam et al, (2019) also found that the involvement of public universities in giving aspirations to the intention of social entrepreneurship on students also contributed to the implications on the catalyst of social innovation and entrepreneurial initiatives in particular.

In this study, the researcher looked at which design thinking modelling coincided and was adapted by public university students in the development of social entrepreneurship. This dependent variable is also linked to the demographic factors mentioned above, namely gender, business activity experience and education level.

6. Conceptual Framework

The conceptual framework used in this study is illustrated in Figure 2. The researcher chose design thinking which consists of five elements namely empathy, definition, ideation, prototyping and testing as independent variables. Meanwhile, the dependent variable consisting of social entrepreneurship is used to see the relationship to the design thinking factor among public university students. Demographic factors are also linked between these two variables in order to see the difference in the level of social entrepreneurship of public university students based on gender, experience and level of education.

Design Thinking

In this study explains the use and adaptation of the elements found in design thinking, namely empathy, definition, ideas, prototypes and tests. It is also to see how design thinking combines creative and critical thinking that allows information and ideas to be organized, decisions to be made, situations to be improved, and knowledge to be gained.

6.1. Demographic factors

In this study explain some demographic characteristics students recruited such as gender, number of years of experience in involvement community activities (social) and education level. The information obtained will be able to be translated according to the suitability of the next study based on the respondents resulting from these demographic factors.

7. Social Entrepreneurship

In this study explains its characteristics and values a social entrepreneur in carrying out activities for the general public. This dependent variable is to see how the relationship between design thinking and opportunities in creating social value. At the same time, it is to further diversify innovative approaches to address critical social needs.

Therefore, in explaining the use of the concept in this study, the researcher describes the research concept used in the form of a diagram as follows:

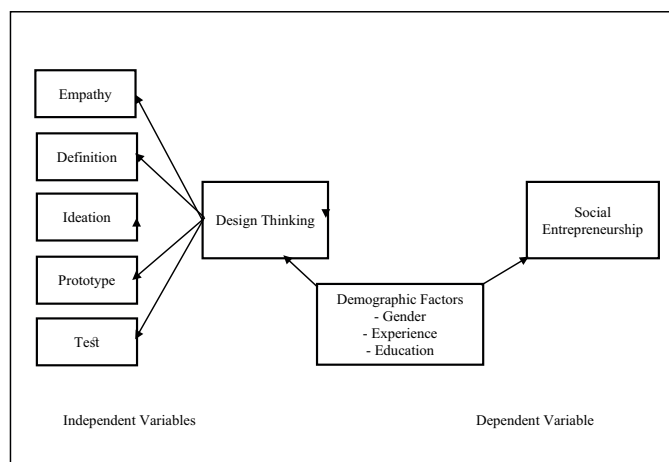


Figure 2: Conceptual Framework.

8. Research Limitation

Every study has limitations and research limitations that make the issues impossible to generalize. Therefore, researchers in the future need to give more effort to succeed in more in-depth research. For more reliable and logical findings, researchers in the future need to make more efforts to collect data based on questionnaires. This means, the questionnaire is distributed to a larger sample, so as to obtain more specific and good results because the responses from the respondents are more and extensive. For this study, the public universities selected are Universiti Kebangsaan Malaysia (UKM), Universiti Teknologi MARA (UiTM), Universiti Malaysia Terengganu (UMT), Universiti Malaysia Pahang (UMP), Universiti Sains Malaysia (USIM), Universiti Malaya (UM), Universiti Tun Hussein Onn Malaysia (UTHM), Universiti Putra Malaysia (UPM) and Universiti Sains Malaysia (USM) where it is small and limited because it only focuses on a few public universities in Peninsular Malaysia. Therefore, future researchers need to choose a wide sample and a larger area such as other public universities throughout Malaysia,

Polytechnic, MARA College and other public higher education institutes. In addition, technological advances allow future researchers to have more respondents through various online methods that are easier and more technological. Online methods are more effective and efficient in conducting research based on the current circulation situation and current technology.

Apart from that, the questionnaire should have an open response (open-ended) in the survey method. By using this type of question, we can receive clearer answers from respondents to achieve the objectives of the study. Different from questionnaires that have optional answer choices or even the 'Likert Scale' method because respondents have limits to voice their opinions. In addition, if the answers obtained are different from the respondents, it is easier to analyse statistically. The size of the study sample is the thing that will affect the findings. The larger the sample size of the respondents, the stronger the findings of the study. Appropriate sampling techniques are also necessary to obtain accurate sample targets and reliable findings.

Finally, future researchers need to study more catalytic factors or the formation of entrepreneurship such as external factors that inspire, the attractiveness of the entrepreneurial world and the positive achievements of entrepreneurship that can explain in more detail the need to produce entrepreneurs among students. Mediating effects are also encouraged to be improved to see the related results in more detail and realistically. Students from private educational institutions should also be included in the study in the future to obtain more extensive research findings.

9. Research Contribution

For the importance of the study for theoretical purposes, this study benefits the field of entrepreneurship in providing the characteristics of a design thinking model that can be developed for social entrepreneurship based on the methods and phases that have been set in the design thinking process so that students will be better prepared to face challenges which is more challenging after graduation, in addition to producing young entrepreneurs based on social entrepreneurship among graduates. The development and application of design thinking is a new method that can be used for the process of creating an innovation. In addition, social entrepreneurship thinking will allow students to create new ideas and innovate where it will give the student an advantage in identifying the best and rational actions. With more students having an entrepreneurial mindset and characteristics, the percentage of unemployment can be reduced and help increase the number of university graduates to be competitive in finding a future direction. At the

same time, the application of design thinking in the development of social entrepreneurs can further increase creativity and innovation for community program planning.

For the sake of research for practical purposes, the government is targeting more young entrepreneurs who have graduated from university with a focus on social entrepreneurship in Malaysia. When entrepreneurship education was introduced, students began to show interest in venturing into the field of entrepreneurship (Ibrahim et al. 2016). In an effort to produce a successful social entrepreneur, the application of the design thinking model is able to open a new step in the world of entrepreneurship in Malaysia in order to achieve the government's desire to become a developed country including in general business affairs. The development of these social entrepreneurs needs to be nurtured, planned and implemented from an early stage in order to see the results of economic development generated in the future. Design thinking model education on social entrepreneurship should be seen from all angles, especially the impact on the country and the public. All government initiatives and efforts for university students should be guided by the theory and model of entrepreneurship so that it facilitates the process of forming a generation of social entrepreneurs. In addition, the importance of this study also for students is to give them space to be more systematic in building and drafting an implementation plan for a solution, especially on the social development of the community. With this, university students who have potential as social entrepreneurs and community leaders will be more strategic and optimistic about what is planned. Appropriate design thinking models can be applied more effectively and give maximum output.

For the importance of the study for academic purposes, this study benefits public higher education institutions because institutions can plan courses, carry out activities and modules that are suitable for the development of social entrepreneurship and design thinking (DT) models. The concept of design thinking should be focused on because this field is still new in Malaysia and requires more time to be adapted by students in teaching and learning sessions. The process is divided into three phases: inspiration, idea and execution. 'Inspiration', the first phase, includes the recognition and understanding of the user's problem or need. After that, in the 'ideation' phase, some ideas are produced that provide possible solutions to the problem. The third phase is 'implementation', which requires an implementation idea. The model is not intended to be linear and thus allows the possibility to be changed accordingly if needed. Therefore, higher education institutions need to expose students to the real state of the world of social entrepreneurship development guided by the design thinking model so that they are physically and mentally prepared when traveling in the real world. This study will

provide benefits to institutions of higher learning to be more confident in forming and subsequently producing students who are highly confident in building their identity as a social entrepreneur.

10. Discussion and Conclusion

This study is an effort to contribute to the field of social entrepreneurship. This includes as a catalyst in empowering social values among students at the public university level in Malaysia. The development of the proposed model is from an individual perspective focused on students of higher education institutions who have an interest in the world of social entrepreneurship. With the development of the concept of design thinking globally, it is time for students at the university level to take proactive steps in applying the elements found in design thinking. This includes every business undertaken and activities or programs implemented for the general level. Students need to explore and study from an early stage the best ways to add value to the socio-economic development of the surrounding community. Social entrepreneurship is the process of recognizing and capitalizing on opportunities to create social value. A social entrepreneur is an innovative, intelligent, and results-oriented person. They use an innovative approach in the business world and do not simply pursue profit to develop strategies that maximize social impact (David, 2020). With the application of elements of empathy, problem definition, idea generation, prototype development and studies, it will boost the positive value towards the world of social entrepreneurship.

Therefore, the researcher suggests that the involvement of university students and educators should continue to foster interest in the application of design thinking elements in social entrepreneurship. Students also need to be prepared and strive to learn the intricacies of design construction methods that can be directly related to the entrepreneurial activities carried out. In addition, educational institutions are suggested to be able to provide more short-term courses related to social entrepreneurship and design thinking. Therefore, through the development of this design thinking model, it is hoped that social entrepreneurship among public university students in Malaysia can be increased and further empower the living standards and social values of the community. In addition, the university is also suggested to be able to play a role in encouraging students to get involved as a social entrepreneur from the university level or when conducting training sessions of learning activities outside. Design thinking is a relatively new concept in the entrepreneurship literature. While the world is still trying to determine whether the concept has different uses, it is good that the model is first

evaluated in relation to the development of social entrepreneurship which is indeed broad. Design is a more robust concept, proven to bring better solutions and has long been explored by design theorists in architecture and design schools (Jeanne, 2013). If design thinking is a problem-solving approach, the literature on design as a foundation of empowerment is very welcome in the world of social entrepreneurship.

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