Enhanced Entrepreneurship Training: Additional Criteria for Malaysian Skills Certificate (MSC) Program Instructor

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Abstract- The focus of this study is to identify and evaluate the criteria of instructors who conduct entrepreneurship training for the Malaysian Skills Certificate (MSC) training program. A total of 6 subject matter experts were selected as respondents to the study using the Fuzzy Delphi method. They consist of MSC instructors as well as entrepreneurship training from several training institutions. Several criteria were taken into account during the selection such as designation, level of education, expertise, work experience in the field of TVET training and entrepreneurship. Their selection is balanced between MSC training and entrepreneurship training. A questionnaire containing 8 items was given to all experts. The results of the evaluation by all respondents found that all these components and items have been accepted for use. Overall, they think that these instructor criteria can increase awareness, increase competence and can produce entrepreneurs among MSC trainees when the training is over.

Keywords: Entrepreneurship Training, Instructor Criteria, Malaysian Skills Certificate (MSC), Fuzzy Delphi Method

1. Introduction

The Malaysian Skills Certificate (MSC) program is one of the most popular vocational training programs in Malaysia. This program managed by the Department of Skills Development (DSD) under the Ministry of Human Resources is one of the two sectors in the Malaysian Qualifications Framework (MQF) that issues qualifications to TVET graduates (Economic Planning Unit, 2021). The MSC program has used Competency Based-Training (CBT) which focuses on four main aspects which are cognitive, affective, psychomotor skills and core abilities (Noor et al., 2019). This program has used three methods to recognize a person's qualifications in a vocational field. The method is through a system of accredited centers (full-time programs), the National Dual Training System (NDTS) and Recognition Prior Achievement (RPA) (Department of Skills Development, 2022). This vocational skills program has five certification levels. They start with the certificate level which is MSC level 1 to level 3, the diploma level for level 4 and the highest is the advanced diploma level level 5 (Mat et al., 2020).

The Malaysian Qualifications Framework (MQF) is implemented with the main objective of improving the quality of the education system in Malaysia. MQF includes various results that need to be achieved to ensure that educational output reaches a high standard (Economic Planning Unit, 2021). These results are grouped...
according to specific categories. First, in the aspect of knowledge and understanding, MQF emphasizes the importance of deep knowledge and understanding in the field of study (Malaysian Qualifications Agency, 2019). This helps produce graduates with strong academic competence. Second, cognitive skills become the main focus in training analytical thinking, synthesis, and problem-solving abilities (Noor et al., 2020). This helps to increase the intellectual power of graduates which is applied in various contexts. Furthermore, the MQF emphasizes functional work skills that include practical skills, interpersonal skills, communication skills, digital skills, numeracy skills, and leadership, autonomy, and responsibility (Economic Planning Unit, 2021). This aims to ensure that graduates are not only proficient in academics, but also ready to join the job market with high efficiency.

In addition, personal and entrepreneurial skills are also emphasized to foster entrepreneurial spirit and self-reliance among graduates. This reflects the dream of producing individuals who not only excel in academics but also have the power to innovate and dare to take risks (Economic Planning Unit, 2021). Finally, MQF focuses on ethics and professionalism to ensure that graduates can function in society with full ethics and professionalism (Noor et al., 2020). This forms the basis of integrity and reputation among graduates. From this framework it can be seen that the direction of education quality highlighted by MQA makes entrepreneurship one of the indicators of a graduate's achievement (Department of Skills Development, 2022). In order to achieve this goal, the preparation of instructor at DSD accredited centers needs to be strengthened since the instructor is the implementer of this vocational skills program.

1.1 Problem Statement

The Malaysian Skills Certificate (MSC) program is vocational training programme that implements a training system based on two competency standards known as the National Occupational Skills Standard (NOSS) and the National Competency Standard (NCS). NOSS contains three main elements, namely cognitive skills, affective, psychomotor. NCS, on the other hand, is a complementary element that contains generic skills (Department of Skills Development, 2022). Both of these components combined are intended to produce k-workers and technology entrepreneurs in 2025 (Economic Planning Unit, 2021). The MSC program is conducted at a training provider centre appointed by DSD after meeting certain conditions (Mat et al., 2019). These training centres are known as DSD accredited centers after they meet the conditions that have been set (Abdul Rasid et al., 2020). There are two types of DSD accredited centres, namely public accredited centers and private accredited centres (Ahmad Fauzi et al., 2022). In 2022, DSD reports that there will be 1,511 public and private accredited centres throughout Malaysia (Department of Skills Development, 2022). These accredited centres have a capacity of 250,224 trainees who undergo training in various fields (Mat et al., 2019).

The Department of Skills Development (DSD) has imposed several conditions on training providers before being accredited. These conditions include accreditation criteria, accreditation personnel, program accreditation structure, implementation of accredited programs, restrictions on accredited centres, accreditation renewal, program changes and program renewal (Department of Skills Development, 2022). Looking at the appointment of instructor known as assessment officers, a person needs to meet certain conditions. An example of this condition is that he must have a higher or highest MSC to handle the program's accreditation assessment (Abdul Rasid et al., 2019). He also needs to pass an induction course as an assessment officer run by DSD and he needs to have a teaching technique certificate known as Vocational Training Operation (VTO-3) (Mat et al., 2020). All these conditions are to ensure that instructors can carry out teaching and learning activities based on NOSS and NCS (Noor et al., 2019).

Vocational skills training is one of the important components in developing the country's human capital. It plays a role in producing the skilled workforce needed by the industry. However, a study by Ramlee et al. (2017) found that most vocational training graduates face problems in venturing into entrepreneurship. This shows that there is a gap in the provision of entrepreneurship training among vocational training institutions. According to the study of Kamaruddin et al. (2019), the lack of basic knowledge in the field of entrepreneurship is the main reason vocational training graduates fail to enter the business field. In addition, the teaching skills of instructors have also been identified as playing an important role in producing successful entrepreneurs (Rohaizat & Fauziah, 2013). However, the majority of instructors at vocational training institutions are only
trained to teach technical skills, and are not equipped with the knowledge and skills to teach entrepreneurship (Nurhazani et al., 2014). Therefore, instructors need to be equipped with certain criteria to make them proficient in delivering entrepreneurship content, in addition to technical skills. This is to ensure that vocational training institutions can produce graduates who are able to venture into the field of entrepreneurship, in line with the country’s aspirations to produce more Bumiputera entrepreneurs.

1.2 Research Objectives

In an effort to understand and improve entrepreneurship training at DSD-accredited centres, research, and discussion on the additional criteria of an instructor who conducts entrepreneurship components in MSC training programmes. This article aims to explore two main objectives that will guide this research and discussion.

1) To identify additional criteria for instructors who conduct entrepreneurship training at DSD-accredited centers.
2) To evaluate additional criteria for instructors who conduct entrepreneurship training at DSD-accredited centers

1.3 Research Questions

Entrepreneurship training at the DSD credited centres is a critical aspect in preparing trainees to become successful future entrepreneurs. However, in an effort to improve the quality of entrepreneurship training, there are several questions that need to be answered to achieve the objectives of this study.

1) What are the additional criteria for instructors who conduct entrepreneurship training at DSD-accredited centers?
2) Are the additional criteria effective for instructors who conduct entrepreneurship training at DSD-accredited centers?

2. Literature Review

Instructors are the backbone of TVET programs at vocational training centers in Malaysia. In the context of rapid economic development, entrepreneurship training at DSD accredited centres is becoming increasingly critical. Instructors who conduct entrepreneurship training play a major role in shaping the entrepreneurial mindset among trainees (Samsinar et al., 2019). The criterion of quality Instructor is a determining factor in the effectiveness of entrepreneurship training programs at DSD accredited centers (Abdul Rasid et al., 2020). High technical and pedagogic skills are required so that instructors can deliver curriculum content effectively and fuel entrepreneurial spirit (Mat et al., 2020). In addition, instructors need to have a deep understanding of the changes in the business landscape and the latest technology to ensure that the training delivered is relevant and up-to-date (Noor et al., 2019). The importance of quality instructor has also been emphasized in the Department of Skills Development Strategic Development Plan 2021-2025 which emphasizes training to improve the skills and reskilling of teaching staff as the main strategy of the plan (Department of Skills Development, 2021).

2.1 The Entrepreneurship Training Program at TVET Institutions

The entrepreneurship training program at the Institute of Technical and Vocational Education and Training (TVET) has a crucial role in forming a proactive and innovative young generation in the business arena. Entrepreneurship not only stimulates economic growth, but also contributes to social development and community well-being (Smith, 2022). In recent years, entrepreneurship training programs at TVET Institute have received increased attention, showing awareness of the importance of developing entrepreneurial skills. These programs not only emphasize theoretical knowledge but also involve practical experience, giving trainees the opportunity to apply theory in a real business context. For example, through industry collaboration, trainees can get involved in entrepreneurial projects involving market research, product planning, and marketing strategy. This helps improve trainees’ ability to think creatively, assess risk, and understand market dynamics.
The importance of this entrepreneurship program is also supported by recent research that shows that trainees who follow entrepreneurship training have a higher tendency to become successful entrepreneurs after graduation (Smith, 2022). Entrepreneurship is not just a skill, but a mindset that can shape individuals into bold and innovative thinkers. In addition, entrepreneurship also plays an important role in addressing the issue of unemployment by providing an alternative for trainees to become self-employed. Initiatives like this are in line with government policies that support the development of entrepreneurship among the younger generation. The entrepreneurship training program at the TVET Institute is a positive step in shaping trainees into individuals who are not only skilled in technical fields but also have the ability to create business opportunities. By engaging trainees in practical experience and providing them with relevant knowledge, this program opens the door to greater entrepreneurial potential among young Malaysians.

2.2 Instructor’s Criteria for Entrepreneurship Training Programme

The effectiveness of an entrepreneurship training program depends largely on the selection criteria of appropriate instructor. One of the main characteristics that an entrepreneurship instructor must have is the ability to distinguish between entrepreneurship training and business training (Hafsah et al., 2019). This is because both require different approaches in delivering content and activities. In addition, coaches also need to have competence as entrepreneurs themselves (Samsudin et al., 2019). Practical experience in the field of entrepreneurship allows instructor to share real experiences with course trainees.

The next competency is the ability to teach entrepreneurship effectively (Ab. Aziz & Mahmood, 2021). The ability to deliver course content and conduct appropriate learning activities is essential. Instructor also need to always be open to new and creative teaching methods to attract the interest of trainees (Samsinar et al., 2019). The role of facilitator and mentor who provides guidance is also important to trainees (Mustafa et al., 2020).

In addition, instructor need to constantly increase knowledge in the field of entrepreneurship so that teaching is in line with current developments (Hussain et al., 2019). Direct involvement in entrepreneurial activities can also enrich the instructor’s experience (Ahmad et al., 2020). For example, in this study, a total of six experts were selected as references to verify additional criteria for instructors who conduct entrepreneurship training. They consist of three senior instructors of the MSC program and three instructors of entrepreneurship education.

3. Methodology

The Fuzzy Delphi method was introduced in 1988 as a result of combining the conventional Delphi technique with fuzzy set theory by Kaufmann and Gupta (Wibowo & Grandhi, 2019). It is a research method that uses the Delphi process repeatedly with the help of a fuzzy Likert scale to obtain consensus from a panel of experts on an issue or research problem. Among the advantages of the Fuzzy Delphi method is that it can obtain qualitative information through the Delphi process, as well as measure the level of importance of items using a more accurate fuzzy scale. In addition, this method can also reduce answer bias compared to conventional Delphi. The quantitative and qualitative data obtained will be combined to reach the consensus of the expert panel (Lin & Song, 2015; Wibowo & Grandhi, 2019). The procedure for the Fuzzy Delphi method involves several main steps such as defining the research problem, selecting an expert panel, distributing the first questionnaire, changing the qualitative data to a fuzzy scale, analyzing the data, distributing the next questionnaire, and reporting the final results when consensus has been reached (Habibi et al., 2019; Mamat et al., 2020). The combination of the characteristics of the Delphi technique and the ability of fuzzy set theory has made the Fuzzy Delphi method a suitable method for obtaining expert consensus in various fields of study.
In the era of transformation of business and education, demographic studies are becoming increasingly important in formulating strategic and development measures. Understanding the impact of change in society and organizations requires expertise from a variety of fields, and thus, the six experts invited to participate in this study bring diversity in their experience, education, and expertise. The first specialist who holds the position of training manager offers a wealth of nine years of experience in the MSC System field. With a Master's degree, his ability to coordinate complex information systems makes him an important asset in the research process. His expertise is not only limited to technical aspects, but also involves training strategies that can have a positive impact on individual and organizational development.

In addition, the second specialist, a senior lecturer in entrepreneurship training, adds an entrepreneurial dimension to demographic studies. With eleven years of experience and a Bachelor's degree, he brings a deep understanding of training needs to build entrepreneurship among individuals. Involvement in entrepreneurship also provides his views on changes in the career and development of entrepreneurs. The third expert, who holds the position of assistant training manager in the field of MSC Systems, contributes to the study with years of experience and a Bachelor's degree. His expertise spans technical and management, enabling a holistic understanding of demographic issues in the context of employee training and development. Meanwhile, the fourth expert, a senior lecturer in the field of MSC Systems with fifteen years of experience, brings to the study a deep understanding of the evolution of information systems. With this long experience, he is able to provide a historical view and evaluate changes in the field of information technology that may affect the demographics of the organization.

Also learn, the fifth expert, who holds the position of Head of Department in Entrepreneurship training, offers a strategic perspective with eleven years of experience and a Master's degree. His expertise in management and education provides an additional layer to the study, ensuring that the entrepreneurial aspect is also given due attention. Finally, the sixth expert, who is also a Head of Department in Entrepreneurship training, brings seven years of experience and a Master's degree. With a focus on management and education, he contributes to studies with a newer perspective in understanding demographic changes among entrepreneurs.

This combination of six experts provides the necessary diversity in demographic studies using the Fuzzy Delphi Method. With their collective intelligence, this study is expected to provide a deep understanding and practical application in formulating strategies to face demographic challenges in the context of training and entrepreneurship. All these experts, each with unique characteristics that complement each other, prove that across effectiveness is the key to success in conducting a complete and effective demographic study.

<table>
<thead>
<tr>
<th>No.</th>
<th>Code</th>
<th>Designation</th>
<th>Expertise</th>
<th>Education</th>
<th>Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Expert 1</td>
<td>Training Manager</td>
<td>MSC system</td>
<td>Master Degree</td>
<td>9 years</td>
</tr>
<tr>
<td>2.</td>
<td>Expert 2</td>
<td>Senior Instructor</td>
<td>Entrepreneurship training</td>
<td>Bachelor Degree</td>
<td>11 years</td>
</tr>
<tr>
<td>3.</td>
<td>Expert 3</td>
<td>Asst. Training Manager</td>
<td>MSC system</td>
<td>Bachelor Degree</td>
<td>8 years</td>
</tr>
<tr>
<td>4.</td>
<td>Expert 4</td>
<td>Senior Lecturer</td>
<td>MSC system</td>
<td>Bachelor Degree</td>
<td>15 years</td>
</tr>
<tr>
<td>5.</td>
<td>Expert 5</td>
<td>Head of Department</td>
<td>Entrepreneurship training</td>
<td>Master Degree</td>
<td>11 years</td>
</tr>
<tr>
<td>6.</td>
<td>Expert 6</td>
<td>Head of Department</td>
<td>Entrepreneurship training</td>
<td>Bachelor Degree</td>
<td>7 years</td>
</tr>
</tbody>
</table>
Table 4.2 Additional criteria for entrepreneurship training instructor based on Fuzzy Delphi method analysis

<table>
<thead>
<tr>
<th>No.</th>
<th>Items / Elements Terms</th>
<th>Triangular Fuzzy Numbers Terms</th>
<th>Fuzzy Evaluation Process Terms</th>
<th>Expert Consensus</th>
<th>Elements ACCEPTED</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Threshold Value, d</td>
<td>Percentage Experts Consensus, %</td>
<td>m1</td>
<td>m2</td>
<td>m3</td>
</tr>
<tr>
<td>1</td>
<td>Be able to distinguish between entrepreneurship and business education</td>
<td>0.145</td>
<td>94%</td>
<td>0.757</td>
<td>0.903</td>
<td>0.963</td>
</tr>
<tr>
<td>2</td>
<td>Knowledgeable as an entrepreneur</td>
<td>0.199</td>
<td>94%</td>
<td>0.717</td>
<td>0.883</td>
<td>0.963</td>
</tr>
<tr>
<td>3</td>
<td>Knowledgeable as an entrepreneur coach</td>
<td>0.115</td>
<td>94%</td>
<td>0.770</td>
<td>0.917</td>
<td>0.970</td>
</tr>
<tr>
<td>4</td>
<td>Be open to any effective teaching method</td>
<td>0.114</td>
<td>94%</td>
<td>0.757</td>
<td>0.910</td>
<td>0.970</td>
</tr>
<tr>
<td>5</td>
<td>Be able to become a mentor</td>
<td>0.181</td>
<td>94%</td>
<td>0.717</td>
<td>0.857</td>
<td>0.937</td>
</tr>
<tr>
<td>6</td>
<td>Practicing the concept of lifelong learning</td>
<td>0.095</td>
<td>94%</td>
<td>0.783</td>
<td>0.930</td>
<td>0.983</td>
</tr>
<tr>
<td>7</td>
<td>Experienced in conducting entrepreneurial activities</td>
<td>0.095</td>
<td>100.00%</td>
<td>0.730</td>
<td>0.917</td>
<td>0.977</td>
</tr>
<tr>
<td>8</td>
<td>Network friendly</td>
<td>0.095</td>
<td>94%</td>
<td>0.783</td>
<td>0.930</td>
<td>0.983</td>
</tr>
</tbody>
</table>

Based on the analysis in table 4.2, the expert group has agreed on the priority for each instructor's additional criteria. The success of an entrepreneurship training instructor is the key to forming a dynamic and innovative generation of entrepreneurs. In an effort to achieve this goal, eight additional criteria have been identified as determining factors in evaluating the position of an instructor. This analysis will comment on each criteria and their role in forming an excellent instructor.

First of all, practicing the concept of lifelong learning is a crucial aspect. Instructors who constantly update their knowledge can provide fresher and more relevant input to trainees. By understanding that knowledge evolves rapidly, instructors who apply the concept of lifelong learning can play an important role in ensuring learning excellence. The second criterion, being network-friendly, brings a social dimension to the instructor's role. Sharing positions with lifelong learning practices allows instructors to gain feedback and support from a professional network. This close relationship not only strengthens learning, but also opens up opportunities for the exchange of ideas and business opportunities among network members.

The ability to be a mentor, the third criterion, constitutes an aspect of mentoring that cannot be ignored. Instructors who can become mentors can build deeper relationships with trainees, provide more personalized guidance, and help them overcome challenges in the entrepreneurial world. Willingness to be a mentor also reflects the instructor's willingness to actively engage in trainee development. In addition, the ability to be open to effective teaching methods is an important criterion. Instructors who are willing to try different teaching methods can adapt to the diversity of trainees' learning styles. This creates a dynamic learning environment and gives trainees the opportunity to understand the concept of entrepreneurship through various approaches.

The difference between entrepreneurship education and business education needs to be acknowledged, becoming the fifth criterion. Instructors who can distinguish between these two concepts can convey information more accurately and comprehensively to trainees. A deep understanding of entrepreneurship allows instructors to provide deeper insight to trainees, helping them understand the complexities of the business world. Knowledge as an entrepreneur is the sixth criterion that has a direct impact on the credibility of an instructor. Instructors with entrepreneurial experience can share practical insights, make connections with the real business world, and provide real examples to students. This knowledge not only improves the quality of teaching but also inspires trainees to engage in entrepreneurship. Experience in undertaking entrepreneurial activities, the seventh criterion, provides a critical practical dimension to the instructor's role. This experience allows the instructor to
provide examples of decisions, avoid mistakes that novice entrepreneurs may make, and provide insight into the real challenges of doing business.

Overall, these eight additional criteria form a solid basis for evaluating the position of an entrepreneurship training instructor. The effectiveness of an instructor depends not only on technical knowledge, but also interpersonal skills, mentoring abilities, and an open attitude towards continuous learning. By understanding and implementing these criteria, instructors can provide a more positive and lasting impact on the development of entrepreneurial talent among their students.

5. Conclusion

In conclusion, this study provides a holistic view of the need for additional criteria for entrepreneurship training instructors at DSD accredited centers. The results of the study show that there are eight additional criteria that are critical to form a quality instructor, including lifelong learning practices, interpersonal skills, and the ability to differentiate between entrepreneurship and business education. The importance of these criteria is shown in the context of DSD's goal to produce 35% of highly skilled workers (K-workers) and technology entrepreneurs by the year 2025 (DSD, 2020). Instructors, through their ability to meet these criteria, can shape trainees into individuals who are not only skilled in vocational and technical aspects, but also able to innovate and be competitive in the growing digital economy era. The research method that uses the Fuzzy Delphi method (FDM) also provides a systematic and objective dimension to the determination of these criteria. This approach allows expert views to be carefully taken into account, ensuring the relevance and reliability of the data obtained. Overall, this study not only provides an in-depth understanding of the necessary instructor criteria, but also provides insights that are consistent with DSD's aspirations in meeting the needs of the job market and the digital economy in 2025. The hope is that the results of this study can help guide the maintenance of entrepreneurship training for the MSC program to achieve the goals that have been set more effectively.

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6. References


