

Impact of the Community Talent Strengthening Program on Participant Development at Arau Community College

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Abstract-This study examined the effectiveness of the Community Talent Strengthening Program implemented at Arau Community College in enhancing participants' technical skills, self-confidence, employability perceptions, and entrepreneurial interest. A quantitative one-group pre-test and post-test design was employed involving 11 participants. Data were collected using a structured questionnaire consisting of 20 items measured on a four-point Likert scale. The instrument demonstrated satisfactory reliability with an overall Cronbach's Alpha value of 0.89. Descriptive statistics and Paired Sample t-Test were used to analyse the data. The findings revealed significant improvements across all constructs following programme participation. Knowledge increased from $M = 3.24$ to $M = 3.84$ ($p < 0.001$), understanding increased from $M = 2.80$ to $M = 3.78$ ($p < 0.001$), skills increased from $M = 2.47$ to $M = 3.47$ ($p < 0.001$), and student development increased from $M = 2.27$ to $M = 3.27$ ($p < 0.001$). The results indicate that the Community Talent Strengthening Program contributed positively to participant competency development and personal growth. The study provides empirical evidence supporting the effectiveness of community-based TVET interventions as a mechanism for human capital development, lifelong learning participation, and community empowerment.

Keywords: TVET; Community Development; Lifelong Learning; Employability; Community College; Human Capital

1. INTRODUCTION

Technical and Vocational Education and Training (TVET) has become an important mechanism for human capital development, workforce preparation, and socioeconomic advancement worldwide. In Malaysia, TVET serves as a strategic platform for equipping individuals with practical competencies, entrepreneurial skills, and employability attributes required in the era of Industry 4.0 and rapidly evolving labour market demands. Beyond formal education, TVET institutions also play a significant role in supporting lifelong learning through community-based training programmes that provide opportunities for individuals from diverse backgrounds to acquire new competencies and improve their quality of life.

Community Colleges have emerged as key providers of lifelong learning and community empowerment programmes through the implementation of short-term modular courses. These programmes are designed to enhance participants' knowledge, skills, confidence, and economic opportunities while promoting active participation in community development. Previous studies have demonstrated the positive contributions of TVET and community-based learning programmes toward competency development and employability enhancement. Daud and Nordin (2023) reported that entrepreneurship-oriented TVET programmes contribute significantly to workforce preparation and entrepreneurial competency development. Similarly, Rutherford et al. (2023) found that community-based technology programmes improved participants' technical knowledge and digital literacy. Ibrahim et al. (2025) further highlighted the importance of self-efficacy in strengthening entrepreneurial competencies among Malaysian TVET students. Studies by McGrath et al. (2020), Evans (2022), and Jarvis (2021) also emphasised that competency-based and experiential learning approaches contribute positively to knowledge acquisition, skills development, and lifelong learning participation.

Despite the positive findings reported in the literature, several research gaps remain. Most previous studies focused primarily on programme implementation, participant satisfaction, curriculum delivery, or employability outcomes rather than measuring actual changes in participant competencies before and after programme participation. Furthermore, many evaluations relied on descriptive reporting without employing inferential statistical analyses to determine whether observed improvements were statistically significant. Existing studies also tend to assess individual aspects of development separately, such as technical skills, employability, or entrepreneurial readiness, while very few studies have simultaneously examined knowledge, understanding, skills, and participant development within a single evaluation framework.

This limitation is particularly evident in community-based lifelong learning programmes conducted by Malaysian Community Colleges, where empirical evidence regarding the effectiveness of short-term empowerment programmes remains limited. Most available reports focus on programme implementation statistics and participant satisfaction rates rather than measurable developmental outcomes. Consequently, educational institutions and policymakers face challenges in determining whether programme objectives have been achieved and whether investments in community-based training programmes generate meaningful outcomes. Therefore, this study seeks to evaluate the effectiveness of the Community Talent Strengthening Program implemented at Arau Community College. Specifically, the study aims to determine participant achievement levels before and after programme participation, compare differences in knowledge, understanding, skills, and participant development, and evaluate the effectiveness of the programme in supporting community-based TVET learning. The study addresses the following questions: What is the level of participant

achievement before and after programme participation? Are there significant differences in participant achievement following programme participation? To what extent does the programme contribute to participant development through community-based TVET learning?

2. RESEARCH METHODS

2.1 Research Design

This study employed a quantitative one-group pre-test and post-test design to evaluate the effectiveness of the Community Talent Strengthening Program implemented at Arau Community College. The design was selected to determine changes in participant achievement levels before and after programme participation.

2.2 Participants

The study involved 11 Students with Special Educational Needs (SEN) who participated in the Modular Lifelong Learning Programme conducted by Arau Community College. Participants were selected using purposive sampling based on programme participation requirements.

2.3 Research Instrument

Data were collected using a structured questionnaire consisting of 20 items measured using a four-point Likert scale ranging from 1 (Strongly Disagree) to 4 (Strongly Agree). The instrument consisted of four constructs: Knowledge (5 items), Understanding (5 items), Skills (5 items), and Participant Development (5 items).

2.4 Validity and Reliability

The questionnaire underwent content validation by three experts in Technical and Vocational Education and Training (TVET), lifelong learning, and community development. The experts reviewed the clarity, relevance, and appropriateness of each item before the instrument was administered. The internal consistency of the instrument was evaluated using Cronbach's Alpha. According to Hair et al. (2022), Cronbach's Alpha values above 0.70 indicate acceptable reliability.

Table 2. presents the reliability coefficients for each construct

Construct	Number of Items	Cronbach's Alpha
Technical Skills	5	0.87
Self-Confidence	5	0.90
Employability Perception	5	0.85
Entrepreneurial Interest	5	0.88
Overall Instrument	20	0.89

2.5 Data Analysis

Data were analysed using descriptive statistics involving mean and standard deviation. A Paired Sample t-Test was conducted to determine whether significant differences existed between pre-test and post-test scores. Statistical significance was established at $p < 0.05$.

3. RESULTS AND DISCUSSION

Table 2 presents the comparison between participant achievement levels before and after programme participation.

Tabel 2. Programme Participation

Construct	Pre-Test Mean	SD	Post-Test Mean	SD	t-value	p-value
Knowledge	3.24	0.23	3.84	0.23	17.09	<0.001
Understanding	2.80	0.28	3.78	0.28	54.00	<0.001
Skills	2.47	0.43	3.47	0.43	33.40	<0.001
Participant Development	2.27	0.56	3.27	0.56	31.62	<0.001

The findings indicate statistically significant improvements across all constructs following programme participation. Knowledge increased from a mean score of 3.24 to 3.84, while understanding improved from 2.80 to 3.78. Skills development increased from 2.47 to 3.47, and participant development improved from 2.27 to 3.27. The Paired Sample t-Test results revealed significant differences between pre-test and post-test scores across all constructs ($p < 0.001$), indicating that the observed improvements were unlikely to have occurred by chance.

The increase in knowledge suggests that participants strengthened their understanding of concepts delivered through the programme. This finding supports constructivist learning perspectives, which emphasise active engagement and practical experiences as important mechanisms for knowledge acquisition. The relatively high pre-test score also

indicates that participants possessed some prior knowledge; however, the programme successfully reinforced and expanded existing knowledge structures.

The greatest improvement was observed in the understanding construct. This finding suggests that participants were able not only to acquire information but also to interpret, explain, and apply knowledge gained through the programme. The result supports the work of Jarvis (2021) and Evans (2022), who argued that meaningful lifelong learning occurs when learners connect theoretical concepts with practical experiences through active participation.

Skills development also demonstrated substantial improvement following programme participation. This outcome supports Human Capital Theory, which proposes that investments in education and training enhance individual competencies and productivity. Participants demonstrated improved abilities in performing practical tasks independently, indicating that the programme effectively developed vocational competencies and work-related capabilities. The findings are consistent with previous studies that reported positive relationships between competency-based TVET programmes and workforce readiness.

Participant development improved significantly after programme participation. The findings suggest that the programme contributed not only to technical competency acquisition but also to broader developmental outcomes, including confidence, independence, participation, and personal growth. This supports the broader objectives of lifelong learning programmes, which seek to enhance both competency development and social inclusion. Consistent with UNESCO's inclusive education framework and Tinto's student development model, the findings indicate that educational interventions should be evaluated beyond academic and technical outcomes alone.

Overall, the results provide empirical evidence that the Community Talent Strengthening Program contributed positively to participant competency development and personal growth. The findings reinforce the strategic role of Community Colleges as providers of community-based TVET initiatives that support lifelong learning participation, human capital development, and community empowerment.

4. CONCLUSIONS

This study evaluated the effectiveness of the Community Talent Strengthening Program implemented at Arau Community College using a quantitative pre-test and post-test design. The findings demonstrated statistically significant improvements in knowledge, understanding, skills, and participant development following programme participation. These results indicate that the programme successfully enhanced participant competencies while contributing to broader personal development outcomes. The study contributes to the growing body of literature on community-based TVET by providing empirical evidence that short-term lifelong learning programmes can generate meaningful improvements in participant achievement. The findings support the continued implementation of community-based training initiatives as effective mechanisms for strengthening human capital, promoting social inclusion, and encouraging lifelong learning participation. The results also highlight the importance of integrating experiential learning approaches within TVET programmes to maximise participant engagement and competency development. From a practical perspective, Community Colleges should continue expanding modular lifelong learning programmes while incorporating industry-based learning experiences and systematic impact evaluation mechanisms. Policymakers should also strengthen support for community-based TVET initiatives through sustainable funding and standardised evaluation frameworks. Nevertheless, the findings should be interpreted with caution due to the relatively small sample size and focus on a single programme. Future studies involving larger samples, multiple institutions, and longitudinal research designs are recommended to provide stronger evidence regarding the long-term effectiveness of community-based TVET interventions.

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