Analysis of entrepreneurship core competency and curriculum integrated with local culture and products

Dedi Djubaedi¹, Tedi Rohadi¹, Abas Hidayat², Yayoi Kodama³

¹Institut Agama Islam Negeri Syekh Nurjati Cirebon, Cirebon, Indonesia
²Quality Assurance Institute, Sekolah Tinggi Ilmu Kesehatan Cirebon, Cirebon, Indonesia
³Department of Human Relations, Faculty of Humanities, University of Kitakyushu, Kitakyushu, Japan

Article Info

ABSTRACT

Incorporating entrepreneurship into education is an alternative solution to improve the quality of school graduates. This study aims to deeply analyze some of the components of entrepreneurship core competency and curriculum integrated with several local cultural advantages and local products. The method used to analyze in depth the components was the structural equation model (SEM). The total sample was 180 respondents, with the details being Indonesian public and private high school teachers, curriculum experts, and professional entrepreneurs from Kitakyushu University, Japan and IAIN Syekh Nurjati, Indonesia. The results show that the entrepreneurial core competencies are significantly related to a curriculum integrated with local culture and products. Path analysis shows that each indicator of entrepreneurial core competence and integrated curriculum with cultural advantages and local products are interrelated and significantly influence each other. Entrepreneurship education is relevant for creating graduates with additional abilities. Curriculum integration of the advantages of local culture and products can also foster students’ love for local culture and products as a national identity. The research contributes to providing information and recommendations to teachers and schools about the importance of entrepreneurship core competencies. Besides that, it proves that entrepreneurship learning for high school students is more accessible through the local culture and product approaches.

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Corresponding Author:
Abas Hidayat
Quality Assurance Institute, Sekolah Tinggi Ilmu Kesehatan Cirebon
Brigjend Dharsono St. No.12b, Kertawinangun, Kedawung, 45153 Cirebon, West Java, Indonesia
Email: abasstikescirebon@gmail.com

1. INTRODUCTION

One of the goals of education is to form strong human beings [1] and be able to compete in society to improve the standard of living in various aspects. Education is the power to improve a nation to preferably. The downturn in education can also destroy a nation worldwide. Many internal and external factors support educational success [2]. One of the important factors worldwide is the curriculum [3]. The curriculum is at the heart of education. A proper and quality curriculum is keeping up with the times [4]. A good curriculum will produce qualified graduates and vice versa [5]. The curriculum needs to be continuously developed to guarantee that students will develop sustainably [6].

Facing the issue of the times, all researchers worldwide participate in developing the curriculum. Bridgstock et al. [7] researched at nine universities in Australia and internationally on career-integrated curriculum development. Research by Mohanty et al. [8] are developing a digital game-based learning
curriculum for an academic curriculum in India. According to Vreuls et al. study [9] in the Netherlands, developing responsive curricula necessitates a high degree of adaptation and flexibility from curriculum designers. Mulenga and Mwanza [10] state the process of developing a curriculum in Zambia, particularly the situational analysis, educational objectives, the establishment of curriculum projects, and authoring of curriculum material. These studies prove that the curriculum is very important around the world. In contrast to these studies, this research focuses on the need for students' independence after graduating from school, one of which is entrepreneurship. According to Ratten and Usmanij [11], entrepreneurship education has flourished as a field of study due to its practical importance and role in accelerating the global economy's financial well-being.

Entrepreneurship is the ability and desire of people and groups to identify and develop new business possibilities [12]. Uncertainties and business limitations, one may offer their ideas to the market through entrepreneurial abilities [13], [14]. Entrepreneurial abilities can improve a person's standard of living in today's digital and societal era. Very appropriate as a solution to improve one's skills to reduce unemployment [15]. High school graduates who are unemployed and do not continue their studies in higher education is a problem [16] that needs to be solved by reviewing the school curriculum [17], [18]. Incorporating entrepreneurship into education is an alternative solution to improve the quality of school graduates [19]. Besides that, entrepreneurship in education improves or uses new teaching and learning practices [20]. The goal of entrepreneurship education is to expand students' knowledge of entrepreneurship as a different career option [21]. That provides more significant opportunities for school graduates to find careers and is a solution to reduce unemployment [22].

Entrepreneurial education is widely applied in universities but is still rare in high schools. For example, Taiwan created a cutting-edge entrepreneurial program for undergraduate students studying hospitality [23]. In Indonesian universities, entrepreneurship education is relevant to local curricula [24]. According to Nakao and Nishide [25], based on data from 91 Japanese universities and 457 courses, they found learning about social entrepreneurship education through encouraging students' fundamental academic skills, sense of entrepreneurship, management of social entrepreneurs, and understanding of entrepreneurship. Entrepreneurship education is a medium of inspiration to increase students' creative business skills toward the world of work [26]. In contrast to previous studies, this research focuses on entrepreneurial education for high school students. The reason is that entrepreneurial skills are expected to reduce unemployed high school graduates. In addition, it can be used as a strong foundation when continuing higher education. The culture of university students having part-time work activities is common in almost all countries, for example, Ghana [27] and Japan [28]. In Indonesia, the rise of online shopping has increased the number of students working part-time [29]. The cultivation of entrepreneurial skills since high school is very beneficial.

To provide the greatest results for future entrepreneurs, educators must continually modify the educational process, methods, and curriculum in light of the shifting entrepreneurial environment [30]. Entrepreneurial education that supports national education goals, namely instilling an attitude of love for the motherland, is entrepreneurship education through local culture and local products. This study aims to analyze in depth some of the components of entrepreneurship core competency and curriculum integrated with several local cultural advantages and local products.

2. METHOD

The method used to analyze in depth the components of entrepreneurship core competency (X1-X8) and curriculum integrated with local cultural advantages and local products (X9-X10) uses the structural equation model (SEM). A questionnaire with a rating scale and a Likert scale model is the tool used to collect quantitative data [31]. Table 1 shows the questionnaire indicator for entrepreneurship core competency and curriculum integration with local cultural advantages and local products.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Indicators</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurship core competency</td>
<td>Competence ability to read business opportunities</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Competence ability to utilize business</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Competence ability to implement managerial activities</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Competence in human resource management skills</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Competence in conducting commercial activities</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Competence of marketing ability</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Competency ability to apply financial management</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Competence ability to actualize attitudes and behavior</td>
<td>8</td>
</tr>
<tr>
<td>Curriculum integration</td>
<td>The curriculum integrates with local tourism advantages</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>The curriculum integrates with traditional or local culinary</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>The curriculum integrates with traditional or local handicrafts</td>
<td>11</td>
</tr>
</tbody>
</table>
The number of samples will be determined by applying the likelihood estimation theory [32]. According to likelihood estimation theory, minimum sample = 10 × number of indicators = 110. These findings led to the selection of 180 respondents for the samples of Indonesian public and private high school teachers, curriculum experts, and entrepreneur professionals from Kitakyushu University (Japan) and IAIN Syekh Nurjati (Indonesia). Figure 1 shows the framework of the hypotheses.

![Figure 1. The framework of path analysis](image)

3. RESULTS

3.1. Normality assessment

The data used by SEM must have a normal distribution. According to Ghozali [33], normality is identified from the value of the critical ratio (CR) on skewness and kurtosis. If the CR is between the range of -2.58 to 2.58, it means that the distribution of the data is normal. Table 2 shows the result of the assessment of normality using AMOS.

<table>
<thead>
<tr>
<th>Variables (X)</th>
<th>Skewness</th>
<th>CR of skewness</th>
<th>Kurtosis</th>
<th>CR of kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>X11</td>
<td>-0.294</td>
<td>-1.610</td>
<td>-0.715</td>
<td>-1.959</td>
</tr>
<tr>
<td>X10</td>
<td>-0.228</td>
<td>-1.247</td>
<td>-0.745</td>
<td>-2.041</td>
</tr>
<tr>
<td>X9</td>
<td>-0.150</td>
<td>-0.824</td>
<td>-0.617</td>
<td>-1.691</td>
</tr>
<tr>
<td>X8</td>
<td>-0.347</td>
<td>-1.900</td>
<td>-0.600</td>
<td>-1.644</td>
</tr>
<tr>
<td>X7</td>
<td>-0.251</td>
<td>-1.373</td>
<td>-0.867</td>
<td>-2.373</td>
</tr>
<tr>
<td>X6</td>
<td>-0.144</td>
<td>-0.789</td>
<td>-0.936</td>
<td>-2.565</td>
</tr>
<tr>
<td>X5</td>
<td>-0.278</td>
<td>-1.520</td>
<td>-0.520</td>
<td>-1.424</td>
</tr>
<tr>
<td>X4</td>
<td>-0.101</td>
<td>-0.551</td>
<td>-0.933</td>
<td>-2.554</td>
</tr>
<tr>
<td>X3</td>
<td>-0.402</td>
<td>-2.200</td>
<td>-0.534</td>
<td>-1.463</td>
</tr>
<tr>
<td>X2</td>
<td>-0.311</td>
<td>-1.706</td>
<td>-0.523</td>
<td>-1.432</td>
</tr>
<tr>
<td>X1</td>
<td>-0.214</td>
<td>-1.170</td>
<td>-0.681</td>
<td>-1.866</td>
</tr>
</tbody>
</table>

According to the criterion for a normal distribution of data, Table 2 displays all CR values. The result is that the variables X1 to X11 are all normally distributed. Therefore, 11 indicators of entrepreneurship core competency and curriculum integrated with local cultural advantages and local products deserve SEM analysis.

3.2. Goodness of fit test

Table 3 shows the result of AMOS output for the acceptable SEM model in this study based on critical value. Based on the results of data processing obtained: Chi-square=37.168 (small) is acceptable; probability=0.721≥0.05 is acceptable; root mean square error of approximation (RMSEA)=0.000≤0.08 is acceptable; goodness of fit index (GFI)=0.964≥0.90 is acceptable; adjusted goodness of fit index (AGFI)=0.944≥0.90 is acceptable; minimum discrepancy function by degrees of freedom divided (CMIN/DF)=0.864≤2.00 is acceptable; Tucker–Lewis index (TLI)=1.062≥0.95 is acceptable; comparative fit
index (CFI)=1.000≥0.95 is acceptable; root mean square residual (RMR)=0.027<0.05 is acceptable; noncentrality parameter (NCP)=0.000 (small) is acceptable. The criteria for good fit are all met based on these results, and the hypothesis testing step can proceed.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Results</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square</td>
<td>37.168</td>
<td>Good</td>
</tr>
<tr>
<td>Probability</td>
<td>0.721</td>
<td>Good</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.000</td>
<td>Good</td>
</tr>
<tr>
<td>GFI</td>
<td>0.964</td>
<td>Good</td>
</tr>
<tr>
<td>AGFI</td>
<td>0.944</td>
<td>Good</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>0.864</td>
<td>Good</td>
</tr>
<tr>
<td>TLI</td>
<td>1.062</td>
<td>Good</td>
</tr>
<tr>
<td>CFI</td>
<td>1.000</td>
<td>Good</td>
</tr>
<tr>
<td>RMR</td>
<td>0.027</td>
<td>Good</td>
</tr>
<tr>
<td>NCP</td>
<td>0.000</td>
<td>Good</td>
</tr>
</tbody>
</table>

### 3.3. Hypothesis test

Table 4 shows the output of AMOS to determine which hypotheses are accepted and rejected in this study. Based on the significant value of the output of AMOS, if the P-value ≤0.001, the hypothesis is accepted. Based on the significant value of the output of AMOS, if the P-value >0.001, the hypothesis is rejected. Based on Table 4, the entrepreneurship core competency is significantly related to the curriculum integrated with local cultural advantages. The hypothesis is accepted, indicated by CR value 2.240 with P-value 0.001≤0.001 (significant value based on AMOS output). Through this path analysis with the SEM method, it can be concluded that each indicator (X1 to X11) is interrelated and significantly influences each other.

<table>
<thead>
<tr>
<th>Variables</th>
<th>CR</th>
<th>P</th>
<th>Hypothesis support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurship core competency</td>
<td>2.240</td>
<td>0.001</td>
<td>Yes</td>
</tr>
<tr>
<td>Curriculum integrated with local cultural advantages and local products</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 4. DISCUSSION

#### 4.1. Entrepreneurship core competency and curriculum integration with local cultural advantages and local products

Table 4 found that there is a significant relationship between entrepreneurship core competency and curriculum integration with local cultural advantages and local products. This means that the two variables support each other; if done well in schools, they can produce graduates with entrepreneurial skills and ready to compete in society. Integration with local culture is an easy thing to do, and students find it easier to identify cases that are local rather than non-local. Practicing entrepreneurship becomes easier. Besides that, it adds to students' love of local culture. According to Hidayati et al. [34], besides cognitive achievement, increasing love for local culture also indicates learning success.

The advantages of local tourism in Indonesia, for example, religious tourism, provide great opportunities to practice entrepreneurial learning. The entrepreneurship curriculum, integrated with Indonesian history and culture lessons in schools, is the capital for learning entrepreneurial practices as a tour guide. The advantages of local tourism in Japan, such as Otera and Jinja (temples), provide great opportunities to practice entrepreneurial learning. The entrepreneurship curriculum, integrated with Japanese history and culture lessons in schools, is the capital for learning entrepreneurial practices as a tour guide. Curriculum integration like this can foster a love for local tourism. According to Santa and Tiatco [35], local tourism is a representation of national identity. Even in the future, it is predicted to give birth to entrepreneurs who can introduce their country's tourism to the international community.

Traditional or local culinary advantage provides a great opportunity to practice entrepreneurial learning. In Indonesia, the entrepreneurship curriculum that is integrated with culinary lessons at school is the capital for learning entrepreneurial practices in the local culinary field, for example, "Kerupuk Melarat" (traditional Indonesian snacks). In Japan, the entrepreneurship curriculum that is integrated with culinary lessons at school is the capital for learning entrepreneurial practices in the local culinary field, for example, "Senbei" (traditional Japanese snacks). Learning entrepreneurship using a local culinary approach becomes easier for students at an early stage. Curriculum integration like this can foster a love for local culinary.
Research by Palma and Ragas [36] explained that local culinary is a representation of national identity. Even in the future, it is predicted to give birth to entrepreneurs who can introduce their country's traditional culinary to the international community.

The advantages of traditional or local handicrafts provide great opportunities to practice entrepreneurial learning. In Indonesia, an entrepreneurship curriculum integrated with local craft content lessons in schools is capital for learning entrepreneurial practices in handicrafts, for example, "Batik" (traditional Indonesian cloth). In Japan, an entrepreneurship curriculum integrated with local content lessons in crafts at schools is capital for learning entrepreneurial practices in handicrafts, for example, "Origami" (the Japanese art of paper folding). Curriculum integration like this can foster a love for local crafts as a national identity. Study by Beverland et al. [37] stated that local crafts could represent national identity. Even in the future, it is predicted to give birth to entrepreneurs who can introduce their country's traditional crafts to the international community.

In general, an entrepreneurship curriculum that integrates with the local culture and local product of a region or country provides individual benefits in the form of entrepreneurial skills. At the same time, it strengthens the love for the country's traditional products nationally. Based on the results of path analysis through SEM, the following is an in-depth analysis of each core competency indicator and each indicator (X1 to X11) of curriculum integration with local cultural advantages.

4.2. Competence ability to read business opportunities

Based on the results of path analysis using SEM, the competence to read business opportunities has a significant relationship with an integrated curriculum with local cultural advantages and local products (tourism, culinary, and handicrafts) to maintain the sustainability of one's entrepreneurship. Without the ability to read potential business opportunities, it cannot be decided that a business will be profitable in the future [38]. Individuals who are able to read opportunities will start their own businesses, even creating new business opportunities [22]. Entrepreneurship education that can explore and identify relevant business opportunities encourages new businesses as desired and is resilient in managing any failures [39]. The ability to read business opportunities by exploring and identifying local culture per students' preferences, be it tourism, culinary, or handicrafts, is an integral part of fostering entrepreneurial desires for high school students new to entrepreneurship.

4.3. Competence ability to utilize business

Based on the results of path analysis using SEM, the competence to utilize business has a significant relationship with an integrated curriculum with local cultural advantages and local products (tourism, culinary, and handicrafts). Through local cultural knowledge that students have, students can use this knowledge to create businesses. Students prefer to create something from what they know. Because, the students quickly understand lessons from the surrounding environment [40], [41]. Previous research [42], [43] stated that in entrepreneurship education at universities, local cultural factors were not associated with a higher intensity of intention to create business and entrepreneurship. However, instilling and increasing the ability to utilize business from high school can motivate students before continuing to university.

4.4. Competence ability to implement managerial activities

Learning entrepreneurship from an early age by introducing managerial activities is one of the factors supporting entrepreneurial success [12]. Path analysis results through SEM show a significant relationship between the ability to implement managerial activities and entrepreneurial learning through integrated local tourism advantages, culinary, and handicrafts. Students are taught managerial activities through knowledge of tourism, culinary, and handicrafts in their respective environments.

4.5. Competence in human resource management skills

Instilling human resource management skills is one of the efforts to build entrepreneurship education in the school environment [42], [44]. Path analysis results through SEM show a significant relationship between human resource management skills and entrepreneurial learning through integrated local tourism advantages, culinary, and handicrafts. An essential task in any firm is human resource management, which is the administration of labor and personnel to achieve predetermined goals [45]. Through local culture that students know well, it makes it easier for educators to instill human resource management skills in students. The practice of learning begins with local human resource management as an initial stepping stone toward national and international human resource management.
4.6. Competence in conducting commercial activities

In general, the purpose of entrepreneurship in carrying out economic activities is to make a profit [46], although some are not profit-oriented, for example, social entrepreneurship [47]. In addition, resilient entrepreneurship is needed to maintain and increase the number of profits; here, what plays a role is the ability to carry out commercial activities. At the entrepreneurship learning stage, students must be able to carry out commercial activities according to the general goal of entrepreneurship, namely, making a profit. Path analysis results through SEM show a significant relationship between competence in conducting commercial activities and entrepreneurial learning through integrated local tourism advantages, culinary, and handicrafts. Students practice commercial activities through local product entrepreneurs; in addition to increasing their love for local products, students can also learn to create profits and entrepreneurial resilience.

4.7. Competence of marketing ability

One solution to increase the profits of a business is marketing [48], [49]. Therefore, in entrepreneurship learning, the marketing component has a vital position. In the digital era and the effects of online learning during the COVID-19 pandemic, students are very familiar with and good at using technology [31]. Through technology skills, students are easily directed to study marketing. Students learn to market local products through Internet technology. Path analysis results through SEM show a significant relationship between the competence of marketing abilities and entrepreneurial learning through integrated local tourism advantages, culinary, and handicrafts. This indicates that high school students need to be equipped with marketing skills. Through the practice of marketing local products that seem ordinary, they become products that attract attention nationally and internationally and motivate students to become entrepreneurs.

4.8. Competency ability to apply financial management

Good marketing, expertise in commercial activities, and lots of profit, but if financial management skills do not support it, the result of entrepreneurship is useless. Financial management cannot be separated from entrepreneurship [50]. Therefore, entrepreneurship students need to be equipped with financial management skills. Path analysis results through SEM show a significant relationship between the competence of financial management abilities and entrepreneurial learning through integrated local tourism advantages, culinary, and handicrafts. This shows that the practice of entrepreneurship learning that utilizes local products needs to be supported by training in financial management skills.

4.9. Competence ability to actualize attitudes and behavior

The primary factors of entrepreneurial intention are personal attitude and behavioral quality [51], [52]. Path analysis results through SEM show a significant relationship between the competence ability to actualize attitudes and behavior and entrepreneurial learning through integrated local tourism advantages, culinary, and handicrafts. Through local culture and products that are known to students, students' love for local culture and products makes it easier for teachers to foster a desire for entrepreneurship from an early age. In addition, when students practice entrepreneurship, armed with this love, students can be kind to consumers [53]. It can even transmit the love of local products to consumers.

5. CONCLUSION

The entrepreneurial core competencies are significantly related to a curriculum integrated with local cultural advantages and local products. Each indicator of entrepreneurial core competence and integrated curriculum with local cultural advantages and local products are interrelated and significantly influence each other. Entrepreneurship education is relevant to local curricula. Apart from being relevant to creating graduates who have entrepreneurial skills, curriculum integration of local cultural advantages and local products can also foster students' love for local culture and local products as national identity.

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REFERENCES


BIOGRAPHIES OF AUTHORS

Dedi Djubaedi is a professor and researcher at the Postgraduate Program at Institut Agama Islam Negeri (IAIN) Syekh Nurjati Cirebon, West Java, Indonesia. He studied at IAIN Sunan Gunung Djati Bandung, graduated in 1983, and continued his Master's education at UIN Syarif Hidayatullah Jakarta, graduated in 1995, and a Doctoral degree at UIN Syarif Hidayatullah Jakarta, graduated in 2005. His major research interests include religious studies, Islamic religious education, Islamic studies methodology, and philosophy of science. He served as Rector of IAIN Ambon from 2008 to 2011. He served as Director of Madrasah Education, Director General of Education, Ministry of Religion, 2011-2013. He served as Director of Pascasarjana IAIN Syekh Nurjati Cirebon from 2019 to 2023. He can be contacted at email: djubaedi.dedi@yahoo.co.id.

Tedi Rohadi is a lecturer and researcher at Institut Agama Islam Negeri Syekh Nurjati Cirebon, West Java, Indonesia. He studied Bachelor's degree in English language teaching majoring at the Universitas Terbuka, and graduated in 1992. In addition, in 1993, he graduated from the diploma program for Teaching English as a Foreign Language majoring at ILC Edinburgh University, United Kingdom, and continued his Master's education at Universitas Pendidikan Indonesia, graduated in 2002, and a Doctoral degree at Universitas Negeri Jakarta, graduated in 2014. His major research interests include education, English education, and curriculum. He served as Head of the English study program at IAIN Syekh Nurjati Cirebon, from 2019 to 2023. He can be contacted at email: tedirohadi@syekhnurjati.ac.id.

Abas Hidayat is a lecturer and researcher at Sekolah Tinggi Ilmu Kesehatan Cirebon, West Java, Indonesia. He studied Bachelor's degree in mathematics education majoring at the UIN Sunan Gunung Djati Bandung, graduated in 2010, and continued his Master's education at Universitas Pendidikan Indonesia, graduated in 2015. His major research interests include education, curriculum, social science, statistics, quantitative research, survey research, and development planning. He served as head of the Quality Assurance Institute of STIKes Cirebon, from 2021 to present. He can be contacted at: abasstikescirebon@gmail.com.

Yayoi Kodama is a professor and researcher at the Department of Human Relations, Faculty of Humanities at the University of Kitakyushu, Japan. She studied Ph.D. in social studies majoring at Nagoya University, Japan. Her major research interests include human relations, social science, environmental science, and environmental education. She can be contacted at email: kodama@kitakyu-u.ac.jp.