Four-Step Entrepreneurial System Approach to Control Students Dropout from Secondary School in Indonesia and Supply Chain Performance

Agus Winarti

Bandung Raya University, Jl. Banten 11 Bandung, Indonesia.
aguswinarti56@gmail.com

Abstract--- Student dropout is one of the crucial challenges at Indonesian secondary schools. Increase in dropout ratio has negative consequence towards supply chain performance (SCP). Various studies discussed the issue of student dropout and provided various solutions, however, it is still under discussion among the scholars and practitioners which requires a comprehensive framework. Hence, the objective of this study is twofold. This study primarily focused on two major areas, firstly; introduce various strategies to overcome the student dropout rate at secondary school, secondly; to consider the effect of student dropout ratio on SCP. For this purpose, a survey was carried out and data were collected from secondary school teachers in Indonesia. To carry out a survey, 500 questionnaires were distributed among the secondary school teachers. Results of the study highlighted that, four-step entrepreneurial system approach which is based on four major parts, namely; self-assessment, goal identification, planning and networking has significant role to decrease the student dropout ratio. Moreover, student dropout ratio has negative relationship with SCP. Additionally, entrepreneurial fun learning strengthens the relationship between four-step entrepreneurial system and student dropout ratio.

Keywords--- Student dropout ratio, supply chain, fun learning, self-assessment, secondary schools.

1. Introduction

Supply chain performance (SCP) is an influential part of every organization [1]. Better SCP increases the overall performance of companies [2]. It has the ability to increase the organization success rate [3]. Thus, SCP has central role in increasing the company performance and success rate. As every organization required supply chain activities, therefore, it is important in all type of industries. It shows that SCP is the key to success for organizations.

There are various factors which effect on supply chain. Different studies work on various internal and external factors which effect on SCP [4, 5]. However, this study come up with one unique factor which is not examined by the previous studies. This factor is student dropout ratio at secondary school level. Focus of this study is Indonesian secondary schools. Student dropout ratio has significant link with SCP. Within the secondary schools, the educators educate students with necessary skills of supply chain, these skills show positive effect when the students join any company and perform the duties related to the firm supply chain. In case, firstly, if the student’s dropout ratio increases, the number of successful students pass out from the school decreases which provide less skilled employees for supply chain. Secondly, the dropout student’s failure at school level discourages them which restrict the students to perform confidently in supply chain practices.

However, student dropout is one of the crucial challenges at Indonesian secondary schools. It is important to handle this issue by suing various strategies. Various studies discussed the issue of student dropout and provided various solutions [6, 7]. However, this study provided a unique method to control student dropout ratio at secondary schools of Indonesia. As this study followed four step entrepreneurial system approach to prevent students dropout, as described by Osgood [8]. The four-step entrepreneurial system approach is based on four major parts, namely; self-assessment, goal identification, planning and networking. These four elements have the ability to decrease student dropout ratio in secondary schools’ which effect positively on SCP.

Along with the four-step entrepreneurial system approach, another factor is entrepreneurial fun learning which shows significant effect on students’ retention at school. Stress is one of the reasons of student dropout at school level. High the stress more
will be the student drop out ratio. Therefore, it is needed to decrease the stress level among secondary school students to increase the retention rate. As the stress always shows negative consequence on individuals [9, 10]. Increase the stress level of students decreases their ability to learn which causes in adverse outcomes in shape of student results and ultimately causes to dropout from school. In this case, fun learning is most significant elements. While teaching in the classroom, a trainer must use various fun learning activities which generally help to relax the student minds which increase the ability to learn. In the context of language while teaching, the element of humour will make learning consequences more meaningful to students [11].

Hence, the objective of this study is twofold. This study primarily focused on two major areas, firstly; to introduce various strategies to overcome the student dropout rate at secondary school, secondly; to consider the effect of student dropout ratio on SCP. The objectives of the study are shown below:

1. To investigate the role of four-step entrepreneurial system approach to control the issue of student dropout at secondary schools of Indonesia.
2. To investigate the role of student dropout ratio in SCP.
3. To investigate the moderating role of entrepreneurial fun learning between four-step entrepreneurial system approach and student dropout ratio.

Figure 1 shows the relationship between four-step entrepreneurial system approach, student dropout, entrepreneurial fun learning and SCP. This is one of the unique studies which examined the role of four-step entrepreneurial system approach to handle the student dropout problem empirically, particularly at secondary schools of Indonesia. Additionally, the study is also one of the unique studies which investigated the role of student dropout ratio in SCP. Finally, this study also investigated the moderating role of fun learning to control student dropout problem.

2. Literature Review

How to control the student’s dropout ratio in secondary school is an important question which needed to be answer. In the secondary schools of Indonesia, the student dropout ratio is increasing. Therefore, there is urgent need to work on this problem. To address this problem, Osgood [8] provided four step entrepreneurial system approach to control the student drop out ratio. These four steps are; 1) self-assessment, 2) goal identification, 3) planning, and 4) networking. All the steps are discussed below one by one in relation to the dropout ratio and shown in Figure 2.
2.1 Step One: Self-Assessment

In entrepreneurial development, self-assessment includes understanding one’s essential strengths as well as weaknesses in the setting of running business of their own. The purpose is to leverage the strengths and use external resources, if required to offset parts of weakness. In a general sense, it can be described as:

“self-assessment is a process by which you learn more about yourself—what you like, what you don’t like, and how you tend to react to certain situations. Knowing these things can help you determine which occupations and work situations could be a better fit for you.”

The important word in self-assessment is basically self. By cantering the assessment procedure from the individual’s viewpoint in its place of external forces, self-assessment enables self-discovery. Self-discovery provide assistances to evade the judging as well as negative labelling consequences usually originate in the uniform assessment activities used by public education schemes. To enable a procedure of non-judgmental self-assessment for the age of students related to high school, the study utilized the Myers-Briggs Type Indicator (MBTI) [12]. Figure 3 shows the self-assessment process which indicates the identification of strengths and weakness, identification of goals, identification of resources and monitoring progress.

Though there are many other self-assessment instruments, MBTI is the most prevalent. In fact, “two and a half million Americans a year take the Myers-Briggs. Eighty-nine (89)firms out of the United States (US) Fortune 100 make use of it for employment as well as selection or to provide the assistance to employees understanding about themselves or provide understandings about their co-workers” [8]. A kind of the MBTI is existing online at no-cost, making it straight for wardly available to students. This MBTI on-line version offer individuals to answer to 72 questions with close ended questions such as yes-or-no answers. These techniques to self-assessment shows positive effect on students [13-16]. Positive effect on student’s self-assessment decreases the student dropout ratio and engage the students in entrepreneurial activities. It increases the confidence
level of students which shows significant effect on student dropout ratio.

**H1:** Self-assessment has relationship with student dropout ratio.

### 2.2 Step Two: Goal Identification

In entrepreneurial advancement, goal identifications shapes upon visions gained by the student self-assessment. With respect to the novel perceptions about inherent strengths as well as interests, individuals start to explain as well as articulate business purposes, like what products as well as services they plan to deliver; which customer will buy these services or products and the reason to by these products or services. For the students of high school, goal identifications also planned to shape upon what they acquire or learn about themselves by using self-assessment. With respect to the novel insight into own strengths or own interests in the situation of career development opportunities, these students started to explain and clear their career progress purposes. For individuals’ students at danger of dropping out from their school, research in the behavioural sciences propose that they have partial objectivities and an incomplete understanding of their upcoming purpose in life:

> “Purpose remains a marginal concern in the humanities, and most of our schools - in other words, just about all of the places that try to understand young people in order to promote their healthy development. [17]”

Goal identification is significant elements in entrepreneurship [18, 19]. It has significant role in entrepreneurship activity. Therefore, the students having proper goal, they have less fear of dropout from the school as compared to those students which have no proper goal. Because, the goal identification play a vital role in any activity [20]. It is evident that most of the students are not goal orientated because of immaturity with less concern about the future. This fact causes the students drop out from the school. In this situation, the school play an important role to make the mind of students towards goal orientation and develop their concern about future. Therefore, students must have future goal which help them to achieve something valuable in future and decreases the dropout ratio from school. Thus, goal orientation has most significant role in student dropout ratio.

**H2:** Goal identification has relationship with student dropout ratio.

### 2.3 Step Three: Planning

For entrepreneurial development, business planning includes the individual entrepreneur’s features, benefits, as well as goals recognition by self-assessment as well as goal identification, in the growth and certification of a certain business strategy. Generally, there are diverse stages for generating a business plan effectively, particularly there are six fundamental steps very common to all plans related to the business: define the actual business idea; develop business goals; assess the actual business idea or goals; required projected cash for business; recognise sources of required funds; and accumulate the plan of business. Moreover, in short, the business plan deliver a design or map, for controlling individual decision-making process over time to care entrepreneurial creation progress as well as success. It has major role in business success. Because this planned process shows positive outcomes which form an entrepreneurial venture. The planning file itself develops a tangible form of inspired imagining that carries how the entrepreneur understands themselves following over time. Usually, the business planning procedure is also fluid, authorising alteration over time as the individual entrepreneurs well as business environment is dynamic. The term creative visualization is utilized with athletes as a “planning technique to improve performance and increase competitive outcomes” [21]. Creative visualization is also the “basic technique underlying positive thinking” which effect significantly to the business performance. It has crucial role in entrepreneurship activities.

Planning always plays a crucial role in entrepreneurship activities [22, 23]. A well-planned entrepreneurship activity always leads to the success. It has positive effect to decrease the student dropout ratio. Because the positive entrepreneurship outcomes increase the confidence among the students which motivate them to do entrepreneurial venture through better planning. Successful entrepreneurship activity increases the courage among the students which is quite possible with the help of planning. Thus, entrepreneurship planning has major role in venture success [24, 25]. Good entrepreneurship planning help to estimate the resources of the business that how much finance is requires, how much human skills are required, where to get the raw material, where to supply the finish goods and how to arrange the good place for business. These points lead to the student interest in entrepreneurship which effect on the student dropout ratio.

**H3:** Planning has relationship with student dropout ratio.
2.4 Step Four: Networking

Final and fourth step of entrepreneurial system approach is networking. It can be defined as a procedure of assembling contactor “building up or maintaining informal relationships especially with people whose friendship could bring advantages such as job or business opportunities”[26]. In entrepreneurship, developing, sustaining as well as successfully applying support networks are fundamental element to improvement. For secondary school students, networking is also significant to progress. Getting knowledge and efficiently utilizing networks such as those accessible by academic organizations, expansion organizations, public services, various government activities, industry relations, and programs related to workforce development provides to student’s numerous advantages. For instance, networking provides assistance to students to try out their valuable ideas, advance actual world skills as well as promote understanding of how various studies like science, engineering, technology and math might be applicable to their long-term objectives. Networking provides students career development opportunities, such as job investigation, internships, and various part-time as well as full-time opportunities of summer employment. To enable network responsiveness and construction as part of the study, web-based latest technologies, different resource portals, various gateways, social media platforms, and numerous search engines related to the internet were clarified. These elements have relationship with student dropout ratio. Students were requested to use these tools to research and to classify numerous resources that they wanted to study more about and attach with together more data or information related to their individual welfare and career development goals. Therefore, networking has most important role in any entrepreneurship activity which effect positively on the student dropout ratio. Therefore, networking has key role in entrepreneurship and student dropout ratio. It is clear from the literature that networking has relationship with entrepreneurship [27-29]. These studies show the networking is crucial in entrepreneurship. Networking is based on social capital, according to Ul-Hameed et al. [30], social capital has positive effect on micro enterprise success. It increases the motivation level among the students about entrepreneurship activity. Therefore, it deceases the student dropout ratio by promoting student’s entrepreneurship activities.

H4: Networking has relationship with student dropout ratio.

2.5 Student Dropout Ratio and Supply Chain Performance

This four-step entrepreneurial system (self-assessment, goal identification, planning, networking) also has role in supply chain. As these students has crucial role in supply chain activities in supply chain companies. For instance, educators typically train school students related to suitable supply chain management practices starting with the manufacturer of products as well as services used in their specific industry, as opposite to examining the whole supply chain [31]. Within the secondary schools, the educators educate students with necessary skills of supply chain, these skills show positive effect when the students join any company and perform the duties related to the firm supply chain. Therefore, there is a relationship between students and supply chain [32, 33].

Supply chain security as well as management serves world-wide as a valued preliminary textbook for postgraduate as well as other undergraduate students [34] which shows significant link between students and SCP. Less dropout of students from secondary schools has positive effect on the number of students pass out from schools with certain supply chain skills and effect positively on SCP. Moreover, according to Anderson Jr and Morrice [35], student managers can better handle the demand and supply of goods. This shows that students have significant effect on supply chain process. Thus, decrease in student dropout ratio from the secondary schools will lead to the better performance. Therefore, this four-step entrepreneurial system (self-assessment, goal identification, planning, networking) has positive effect to reduce student dropout ratio from secondary schools and decrease in student dropout ratio has positive effect on supply SCP.

H5: Student dropout ratio has relationship with SCP.

2.6 Entrepreneurial Fun Learning

Along with the four-step entrepreneurial approach, fun learning is another factor which help to decrease the student dropout ratio. Generally, fun learning is based on language while teaching at school level. Fun learning decreases the student stress and increases their learning capability which effect positively on dropout ratio. According to Parker and Lepper [36], it has positive effect on children’s learning process. In the context of language while teaching, the element of humour will make learning consequences more meaningful to students [11]. Teachers required to use fun learning factors in their languages that can direct funny feelings as well as using graphs like
cartoons with body language that can develop a fun atmosphere for students effectively[37]. However, it is required to be taught in a relaxed and pleasant environment. This type of fun learning in a relaxed as well as pleasant environment develop the student interest and decrease the dropout ratio. As it increases the student entrepreneurial interest which motivate them. Because students usually get bored when a teacher is able to teach grammar well, but in a dull state. According to Daud, et al. [38], joke trainer practice can create a fun learning environment. Therefore, fun learning has effect on student dropout ratio. It effects on the relationship between four-step entrepreneurial approach and student dropout ratio.

**H6:** Entrepreneurial fun learning moderates the relationship between self-assessment and student dropout ratio.

**H7:** Entrepreneurial fun learning moderates the relationship between goal identification and student dropout ratio.

**H8:** Entrepreneurial fun learning moderates the relationship between planning and student dropout ratio.

**H9:** Entrepreneurial fun learning moderates the relationship between networking and student dropout ratio.

3. Research Methodology

This research works with quantitative data. This quantitative data was obtained through performing a survey upon the sample. The survey was conducted in Indonesian secondary schools. Due to the shortage of time and due to limited resources, this study applied cross-sectional research design and data were collected at one point of time.

During the survey, 500 questionnaires were distributed among the secondary school teachers. In the result of this survey, 270 valid responses were received and used for data analysis. Therefore, the response rate is above 50%, which is acceptable. Questionnaires were distributed randomly in the secondary schools of Indonesia among the teachers. Moreover, it is important to present some basic features of the obtained data to have some information and descriptions of the collected data in a manageable form without attempted to infer from the sample data into the population. For this purpose, descriptive statistic was used in this research [39]. This descriptive statistical analysis was used to display the obtained data about education level, average income, gender and marital status. Finally, it was analysed by using Partial Least Square (PLS).

4. Data Analysis and Findings

This study followed partial least square (PLS)-structural equation modeling (SEM) technique to analyze the collected data. It is most suitable technique in primary data analysis. This study followed various steps as mentioned by Hameed, et al. [40]. Figure 4 shows the measurement model which indicates factor loadings. All the factor loadings is above 0.5 [41]. Other results are given in Table 1. Composite reliability (CR) is above 0.7 and average variance extracted (AVE) is above 0.5 [42]. Results of discriminant validity is provided in Table 2.

![Figure 4. Measurement Model](image-url)
Moreover, in this study direct effect between variables is examined. The effect of self-assessment, goal identification, planning and networking was examined on student dropout ratio. It is found that self-assessment, goal identification, planning and networking has significant negative effect on student dropout ratio which indicates that these elements decreases the student dropout ratio. Moreover, increase in student dropout ratio decreases the SCP. Therefore, H1, H2, H3, H4 and H5 are supported. Results are shown in Table 3 and Figure 5.
Table 3. Results

<table>
<thead>
<tr>
<th></th>
<th>(O)</th>
<th>(M)</th>
<th>SD</th>
<th>T Statistics</th>
<th>P Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial Fun Learning -&gt; Student Dropout Ratio</td>
<td>-0.061</td>
<td>-0.064</td>
<td>0.029</td>
<td>2.13</td>
<td>0.015</td>
</tr>
<tr>
<td>Goal Identification -&gt; Student Dropout Ratio</td>
<td>-0.131</td>
<td>-0.124</td>
<td>0.052</td>
<td>2.535</td>
<td>0.005</td>
</tr>
<tr>
<td>Networking -&gt; Student Dropout Ratio</td>
<td>-0.079</td>
<td>-0.073</td>
<td>0.035</td>
<td>2.251</td>
<td>0.009</td>
</tr>
<tr>
<td>Planning -&gt; Student Dropout Ratio</td>
<td>-0.41</td>
<td>-0.405</td>
<td>0.072</td>
<td>5.677</td>
<td>0</td>
</tr>
<tr>
<td>Self-Assessment -&gt; Student Dropout Ratio</td>
<td>-0.43</td>
<td>-0.432</td>
<td>0.069</td>
<td>6.213</td>
<td>0</td>
</tr>
<tr>
<td>Student Dropout Ratio -&gt; Supply Chain Performance</td>
<td>-0.655</td>
<td>-0.656</td>
<td>0.036</td>
<td>18.378</td>
<td>0</td>
</tr>
</tbody>
</table>

Additionally, the moderation effect is shown in Table 4 and Figure 6. Total four moderation effects of entrepreneurial fun learning were examined in this study. It is found that moderation effect is significant between self-assessment and student dropout ratio. Moderation effect is also significant between planning and student dropout ratio. In both cases, moderation effect is positive which strengthen the negative relationship of self-assessment and student dropout ratio, planning and student dropout ratio. Therefore, H6 and H8 are accepted. However, H7 and H9 are not accepted by the current study.

![Figure 6. Moderation Effect](image-url)
Table 4. Moderation Effect

<table>
<thead>
<tr>
<th></th>
<th>(O)</th>
<th>(M)</th>
<th>SD</th>
<th>T Statistics</th>
<th>P Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderating Effect 1</td>
<td>0.214</td>
<td>0.225</td>
<td>0.09</td>
<td>2.372</td>
<td>0.018</td>
</tr>
<tr>
<td>Student Dropout Ratio</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderating Effect 2</td>
<td>0.02</td>
<td>0.009</td>
<td>0.053</td>
<td>0.371</td>
<td>0.711</td>
</tr>
<tr>
<td>Student Dropout Ratio</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderating Effect 3</td>
<td>0.164</td>
<td>0.166</td>
<td>0.076</td>
<td>2.168</td>
<td>0.031</td>
</tr>
<tr>
<td>Student Dropout Ratio</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderating Effect 4</td>
<td>0.03</td>
<td>0.044</td>
<td>0.066</td>
<td>0.453</td>
<td>0.651</td>
</tr>
</tbody>
</table>

5. Conclusion

The current study achieved the three major objectives: 1) To investigate the role of four-step entrepreneurial system approach to control the issue of student dropout at secondary schools of Indonesia, 2) To investigate the role of student dropout ratio in SCP, and 3) to investigate moderating role of entrepreneurial fun learning between four-step entrepreneurial system approach and student dropout. A survey was carried out and data were collected from secondary school teachers in Indonesia. Findings of the current study demonstrated that, four-step entrepreneurial system approach which is based on four major parts, namely; self-assessment, goal identification, planning and networking has significant role to decrease the student dropout ratio. Better implementation of four-step entrepreneurial system decreases the student dropout ratio at secondary schools. Self-assessment, goal identification, planning and networking motivate the students to take part in entrepreneurial activities and encourage to learn which decreases the dropout ratio. Moreover, student dropout ratio has negative relationship with SCP. Increase in student dropout ratio decreases the SCP. Additionally, entrepreneurial fun learning strengthens the relationship between four-step entrepreneurial system and student dropout ratio. Stress is one of the reasons of student’s dropout at school level. High the stress more will be the student drop out ratio. In this situation, entrepreneurial fun learning decreases the student dropout ratio by decreasing the stress level.

References


