



Preparation for Vocational Life-Skills Education Model Implementation for School Dropouts

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Introduction. In this article, social data on adolescent school dropouts are presented alongside a discussion of efforts to improve their life skills and employability. A focus on life-skills education for dropouts living in rural areas reveals how important business skills are for improving employability. The research context and efficient activities for coping with the addressed issues are comprehensively described.

Materials and Methods. A previously developed Life-Skills Education model, involving field study, needs analysis, action research and evaluation, is elaborated to facilitate the collection of data related to the dropout rate and efforts to build soft skills to facilitate employability. Grounded theories on developing employability skills for dropouts are elucidated alongside real-world endeavours to provide a clear picture of what research objectives are achievable and how they can be achieved. Two districts – in Bantul Regency and Yogyakarta Special Province, Indonesia – were selected for the study, in which two sample groups of dropouts were involved in a set of planned activities. Observation, interview, survey and documentation were the main techniques employed.

Results. The obtained results allow a fresh perspective to be obtained on the number and quality of school dropouts in the researched districts, as well as potential solutions for improving their life skills. Specifically, they include the following: (1) As many as 164 identified adolescent dropouts were found to live in the researched rural areas, of which 75% were unemployed, thus requiring appropriate life-skills education. (2) Twenty trainer-tutors were selected according to specific criteria and provided with a set of developed materials of respective knowledge and skills to be taught over the course of a one-month training programme. (3) In both districts, tutors accomplished the pedagogical content knowledge based training programme had improved their knowledge, attitudes, and motivation by the average gain score of 32.30, 3.15, and 5.55 respectively.

Discussion and Conclusion. This paper suggests that the study has successfully prepared the implementation of Life-Skills Education model through its applied stages and recommends that (1) continuous Life-Skills Education programmes to improve the business skills of teenage dropouts should be carried out by managing and developing the qualifications of the tutors and by providing appropriate vocational skills suitable with their needs, and (2) that the contribution of educational interventions on pedagogical content knowledge in interdisciplinary domains might be further analysed.

Keywords: model, life-skills, education, dropout, vocational education, pedagogical content knowledge

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Апробация модели обучения профессиональным жизненным навыкам среди подростков, бросивших школу

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Введение. Наличие на рынке труда подростков, бросивших школу, представляет собой большую социальную проблему для Индонезии. Статья анализирует альтернативную модель обучения важным жизненным навыкам, которые помогут подросткам адаптироваться к требованиям работодателей.

Материалы и методы. Статья представляет собой исследование эффективности ранее разработанной модели обучения жизненным навыкам, которая включает полевое исследование текущего состояния изучаемой проблемы и анализ принимаемых мер для ее решения. В качестве места проведения исследования были выбраны два района, Кабупатена Бантул и особый округ Джокьякарта (Индонезия). В эксперименте приняли участие две группы подростков, бросивших школу. В качестве методов исследования использовались наблюдение, интервью, анкетирование и анализ документов.

Результаты исследования. Полученные результаты позволяют по-новому взглянуть на количество и качества подростков, бросивших школу, а также на предлагаемые меры по развитию их жизненных навыков и умений. По итогам проведенного анализа было установлено, что в исследуемых сельских районах проживают 164 подростка, которые бросили школу, из них 75 % не были трудоустроены, но хотели бы работать. На основе ряда критериев были отобраны двадцать тьюторов, выступающих в качестве наставников этих подростков. В обоих районах тьюторы выполнили учебную программу и улучшили свои знания, отношение и мотивацию.

Обсуждение и заключение. Статья демонстрирует, что модель обучения жизненным навыкам была успешно апробирована, поэтому программы, направленные на развитие навыков и умений подростков, бросивших школу, рекомендуется осуществлять путем повышения квалификации тьюторов и развития их профессиональных навыков.

Ключевые слова: модель, жизненный навык, обучение, бросившие школу, профессиональное образование, педагогическое содержательное знание

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Introduction

This research was carried out on the basis of the actual problems experienced in the southern coastal areas of Bantul Regency, Indonesia. Various indicators, which show that the quality of education has failed to significantly improve, apply particularly to remote rural areas. For example, complaints arise from the business world that graduates entering the workforce are not likely to be adequately prepared. Symptoms of junior and high school graduates are an increasing problem in rural areas due to the difficulty of finding work, while helping their parents work as farmers, traders or anything they can to earn a living.

In order to try to address this problem, this study proposes an alternative model of life-skills education for school dropouts

in order to prepare themselves for entering the workforce using a synergetic approach to develop the potentialities of rural communities. Four components developed over the course of this research are: (1) self-proficiency; (2) rational thinking or cognitive skills; (3) social skills; (4) work skills.

In the literature of adolescent psychological development, the age group is classified into three parts: the group from 12 to 14 years is referred to as early adolescence, 15-17 is middle adolescence, and the one from 18 to 21 years is described as late adolescence [1]. However, this age-based categorisation should be seen primarily in terms of a basis for facilitating learning, while in reality it can be seen to consist in a continuum. Moreover, it should be kept in mind that such age-related categories tend



to change with the culture of the times. For example, young women aged 25-27 years may still be referred to as in late adolescents in the context of more rapid cultural changes than those recorded by psychologists working in the field of adolescence studies.

Adolescence comprises a developmental period that continues school age but involves different developmental problems, including physical, social, psychological, intellectual, skill-based and even religious aspects. One aspect of social development is the urge to be independent, which can be seen in terms of two main directions. The first of these is the desire to separate from one's parents, while the second consists in the urge to associate with a peer group. These two types of movement comprise a reaction to the internal status of young people. Following the onset of puberty, a great discrepancy arises between physical maturity and social ties to the older generation. In adolescents, the desire to break away from one's parents can be seen in terms of the desire to find oneself.

Communities are negatively affected by the large number of teenagers dropping out of school. In the first place, the school dropout phenomenon is a major cause of juvenile delinquency¹. Juvenile delinquency is very detrimental to society because it leads to criminal acts. Secondly, the dropout condition adds to the number of unemployment. Unemployment is often associated with teenagers who are dragged into negative or immoral behaviours such as gambling, drunkenness, violence and so on. Thirdly, the dropout condition reduces the active participation of the teenager in advancing a region and/or region, due to resentment and feelings of inferiority on the part of adolescents. As a result, the development of an area lags very far behind, especially during an era of regional autonomy in Indonesia, when the progress of a region is seen as the responsibility of the region itself [2].

This phenomenon is explained by unemployment rates that are much higher among those who did not complete high school (12 years of education) [3]. Alternatively stated, high school graduates can increase their probability of re-employment by around 40 percentage points [4]. Attempts to curb youth unemployment, therefore, has been carried out by some countries having a similar problem. For example, the Nigerian government has tried to develop self-dependence and self-reliance through the acquisition of vocational skills since 1977 [5]. In a similar fashion, Indonesia has proposed *Pendidikan Kecakapan Hidup (PKH)* or Life-Skills Education (LSE) as a means of equipping high-school graduates with enterprise skills necessary for developing their financial capacity. According to Haryanto et al., schools are assumed to be the optimal means for equipping their graduates with such skills [6]. In line with this, Blazely et al. suggest that the theoretical nature of in-school learning tends to result in a failure to relate what students learn with their actual environment [7]. As a result, they might lack the knowledge and skills to cope with problems emerging in their daily lives. Since there is apparently no representative model for the appropriate implementation of LSE programmes for school dropout teenagers, this study attempted to develop such a programme for tackling specific problems experienced in rural areas of Indonesia by focusing on efforts to develop adolescents' knowledge, skills and attitudes appropriate to their talents and interests. In terms of skills, this study additionally limited its focus on the four main groups of personal, cognitive, social and vocational².

Literature Review

This section offers a critical review of the nature of teenage age, the importance of life and vocational skills for the world of employment and related issues.

¹ Wijaya C.A. Most Crimes in Jakarta Committed by Youngsters: Research. *The Jakarta Post*. 2017. Available at: <https://www.thejakartapost.com/news/2017/06/22/most-crimes-in-jakarta-committed-by-youngsters-research.html> (accessed 11.01.2019). (In Eng.)

² The Ministry of National Education of the Republic of Indonesia. Law No. 20 Year 2003 on Indonesian National Education System. Jakarta: The National Education Office; 2003.

To go further on the adolescents' unemployment, we must arrive at the same understanding of teenagers. From the age point of view, adolescence comprises the period between 12 and 21 years old [8]. This is a period of physical and psychological growth in which in its physical aspect, an accelerated growth occurs. Kartono calls it "heliogene acceleratic" (acceleration of heliogene), namely the period of accelerated growth due to the influence of sunlight [9]. It is so called because, in a period of explorers, many adolescents are directly exposed to activities such as swimming, walking, doing outdoor sports, excursions, and cycling. In Arnett's words, adolescence refers to the age of identity explorations, the age of instability, the self-focused age, the age of feeling in-between, and the age of possibilities [10].

As adolescents grow, they might assume themselves as autonomous individuals who prove that they can stand by themselves. The desire to break away from parents is the desire to participate in what Erikson in Monks refers to the process of seeking ego identity [11]. One process of seeking ego identity is the development of a pure individuality that leads to the efforts to be self-dependent. Teenagers feel that they have become fully autonomous if they are able to earn a living.

In general, adolescents at the age of 18 have completed secondary education. Recently, although there is an increasing awareness on the part of teenagers and parents of the need to complete higher education, at the current time, the high cost of education leads to the tendency for teens to search for work. Rubiyanto reveals that the tendency of working teenagers emerges as a result of their: (a) financial considerations, when a family's financial capacity is low and it is impossible to access higher education so that they are

encouraged to support the family by working; (b) psychological reasons, where adolescents are considered to have achieved sufficient development and they might want to have their own source of income, to be independent and determine their own lives; and (c) sociological reasons, those related to social characters [12]. Rolff in Monks adds that social character consists in the behaviour of someone who is bound by the environment, meaning that schools are perceived as being for middle-class children so that those from low social class are not encouraged to continue their education [8].

The General Directorate of Non-formal and Youth Education³ defines life skills needed by the teenagers for entering the world of work as the ability of a person to master knowledge, skills, and attitudes that are believed to be necessary foundations for living more independently. Thus life-skills education consists in efforts to provide knowledge, skills and attitudes, especially vocational skills for the learning community to be able to work or run an independent business so that they can improve their quality of lives.

Unfortunately, the available data reported that 19.17% of the unemployed respondents are illiterate villagers [13] and that 78.6% of these stated negative attitudes towards schools [14]. This condition should be of our consideration in developing the nation's human resources as they might be elementary school dropouts. Theoretically, dropouts can be interpreted as those leaving formal school before successfully completing their studies⁴. In Indonesia, Haditono mentions that teenagers displaced from school in urban and mountainous agricultural areas in Central Java and Bengkulu, Indonesia are likely to be adolescents aged 13-18, some of whom might leave their school for work [15].

³ General Directorate of Non-Formal and Youth Education. Pedoman Pelaksanaan Programme pendidikan kecakapan Hidup (Life Skill) Pada Sanggar Kegiatan Belajar (SKB) Unit Pelaksana Teknis Dinas (UPTD) Kabupaten/Kota. Empowering Out-of-School Education and Out-of-School Education Project. Jakarta: Directorate General of Non-Formal and Youth Education; 2002. (In Indonesian)

⁴ Vembriarto. Panduan Operasional: Program Pemberdayaan Fakir Miskin Melalui Bantuan Sarana Penunjang Produksi KUBE Bidang Konveksi. Jakarta: Departemen Sosial Republik Indonesia; 2005. (In Indonesian)



To cope with the problems these school dropouts face, LSE has been designed to guide, train and equip them with everything they need so that they can become skilled workers or entrepreneurs. Life skills, especially specific life skills (SLS), are needed by someone to deal with specific problems. For example, to overcome the problem of a broken car, a mechanic needs to have specific skills in working with car engines. To solve the problem of unsold merchandise, marketing skills are certainly needed. To be able to develop molecular biology, other specific skills are needed. SLSs are usually called technical skills (technical competencies) related to methods and contents of certain training subjects. As mentioned before, SLSs cover vocational skills and those related to academic development. Later, academic skills (AS) are often also referred to scientific thinking skills including, among others (1) identification of variables, (2) formulating hypotheses and (3) carrying out research.

Considering that a number of junior high schools (JHSs) and senior high schools (SHSs) graduates neither continue their education nor seek jobs, additional vocational skills (VSs) seem to be needed to equip them for work. Some vocational education programmes initiated by the Indonesian government are variously referred to by the acronyms VS-A, VS-B, VS-C, VS-D and VS-E. Thus, for example, the VS-A package is a vocational education programme for SHS graduates not continuing their education and requiring a job. The VS-B programme is designed for JHS graduates continuing their education and requiring a job. The aforementioned programmes provide the graduates with skills taught in modules in accordance with the needs of the workforce (marketable skills) so that they can immediately work as both employees and independent business owners. The VS-C programme is for students who are studying in SHS but are considered not likely continue their studies. Therefore, since they are still at school, they are offered a vocational education and training programme. The VS-D programme is a pre-vocational education programme

for potential JHS students who will not continue to SHS and will therefore be expected to seek a job. These programmes can be arranged in the form of elective training courses so that schools do not have to add to the load of the credit hours in the curriculum. The VS-E programme is intended for people and teenagers dropping out of school, designed and regulated according to community needs and carried out through training institutions. This programme might be needed by a given community to improve the performance of workers.

The vocational mentioned above education and training programmes (VS-A, VS-B, VS-C, VS-D and VS-E) should be developed through a carefully managed needs analysis in accordance with local development potentialities. These programmes should provide applicable and meaningful knowledge and practical skills so that participants can apply them right away for work. In accordance with the Act. No. 22, 1999 and Government Regulation No. 25, 2000, it is preferable that districts/municipalities take operational responsibility for basic and secondary education. Therefore, districts/municipalities should handle these programmes while the role of the central government should act more as initiators and supervisors.

In each regency and city, there have been JHSs and VHSs with adequate laboratory facilities and Learning Activity Development Centre (BPKB) and Learning Activity Studio (SKB) under the Education Office and Vocational Training Centre (BLK) or Vocational Training Programme (KLK) under the Manpower Office. In addition, there may be training centres, skills courses or even industries that have quite good facilities. Therefore, for the sake of efficiency and synergy, we recommend that these various institutions build a community college that functions as a VS education service unit for VS-A, VS-B, VS-C, VS-D and VS-E.

Last but not least, the success of LSE programmes in the mentioned training institutions, is contributed by, among others, the trainers' qualified skills and education. In this context, focus should be placed

on their education in an effort to improve their qualities. As mandated by the Law of the Republic of Indonesia No. 14 of 2005 No. 14 Year 2005 on Teachers and Lecturers, it is stipulated that competence comprises a set of knowledge, skills and behaviours that must be mastered, lived and owned by teachers or lecturers when performing professional duties. Related to this, test instruments for measuring teachers' cognitive skills have been developed and used in several studies, leading to empirical confirmation that Shulman's pedagogical content knowledge (PCK) that has the potential to transform the quality of the teaching and learning of training participants. In line with this, Baumert et al. found a significant positive effect of teacher content knowledge (CK) and PCK on teaching quality (assessed by means of student assessment, teacher self-report, and task analysis) and on the participants' progress (measured through achievement tests) [16].

Materials and Methods

The research consisted in a two-year study for trying out LSE model carried out in two underdeveloped districts, namely Srandakan and Kretek, in Bantul Regency, Yogyakarta Special Province, Indonesia, which were chosen on the basis of a preliminary study to determine the condition of school dropout adolescents who needed life skills education. This included the results of consultations with local governments in accordance with certain requirements were determined based on methodological considerations. These districts have two coastal sub-districts in which the developed model of life-skills education was initiated and tried out, namely Balairejo and Kemloko in Srandakan and

Hargosari and Ngestirejo in Kretek. During the first year of the study, the researchers conducted a survey in which the data were collected by means of questionnaires, interviews and observations; during the second year, an action research and evaluation study were carried out with experiment, training, observation, and interview done subsequently. The data were analysed using quantitative and qualitative descriptive techniques. The qualitative data meanwhile, analysed by means of Miles and Huberman's [17] interactive model.

In the action research done in the second year, 30 participants from the respective districts chose one of three skills offered, namely Batik making, sewing, and screen printing. The administered 15-20-years-old teenagers attended one-month life-skills education on the selected skills with a schedule of two meetings a week from 2-5 p.m. The programme took place in Tirtomulyo village office taking the concept of pedagogical content knowledge (PCK) into account.

Results

Needs Analysis. Overall, the research design of the Life Skills Education (LSE) model developed in the four pilot villages can run according to the planned stages. The conditions in the two districts (Kretek and Srandakan), four villages (Balairejo, Kemloko, Hargosari, and Ngestirejo) have different characteristics. Following collection of data from two sub-districts, it was found that there were 164 school productive age dropouts, consisting of 55 teenagers in Kretek and 109 people in Srandakan district. The corresponding data are presented in Table 1.

It is apparent from the table that 66% or 109 dropouts are prevalent in Srandakan

Table 1. Number of Productive-Age Youths Not Attending or Dropping out of School in the Researched Districts

No	Districts	Education					Total
		No School	ES	JHS	SHS	College	
1	Kretek	22	20	10	3	–	55
2	Srandakan	45	40	15	9	–	109
	Total	67	60	25	12	–	164



kan compared to that in Kretek which has 55 (44%) of the total 164 productive age dropouts. In detail, most of those living in Kretek district either attended no school or attended elementary school only, meaning that they have lower education background in which this trend is similar to Srandakan residents. In total, 67 (40% of 164) dropouts did not attend any school while 34% (60 people) only graduated from ES. Only a relatively small number of them (22%) graduated from either JHS or SHS. In terms of their age, they might be categorised as 15-20-year-old youths or of productive age. As suggested by the LSE programme, those with a minimum education of ES should be given the priority to receive education or offered training since they have the potential to develop their knowledge and skills or are assumed as jobless.

Regarding employment, the study found that these dropouts are mostly unemployed. The data on their employment status are specified in Table 2.

It is clear from Table 2 that the majority – 75% – of the unschooled and dropout teenagers are jobless. Of these, 85 are in Srandakan, while 25% have found a job. The results reveal that generally they work as farmers and labourers, with only a few working as craftsmen. Based on these data, in order to reduce the dependency of

teenagers dropping out of school, entrepreneurship education should be developed in the respective villages as soon as possible.

Data on interest in entrepreneurship skills for out-of-school adolescents of productive age were collected through 32-item questionnaires with a three-point Likert item, namely “high”, “average” and “low” categories. Within these categories, the lowest ideal score is 32 and the ideal highest score is 128. Based on the data obtained from the respondents, therefore, the lowest score is 58 and the highest score is 124. The frequency distribution of the interest in entrepreneurship for school dropouts can be seen in Table 3.

The data show that in both researched districts, the majority of school dropouts have “moderate” to “high” interest in entrepreneurship, accounting for 90.2%, while only 0.8% or four people have “low” interest. Thus, it can be concluded that there is moderate interest in entrepreneurship of productive age dropouts in two districts.

According to the suggestions and options in questionnaires distributed in this study, the skills of the LSE programme that would be suitable to be taught to school dropout adolescents include sewing, batik making, and screen printing. The proportion of these choices is presented in Figure I.

Table 2. Employment Status of Adolescents Not Attending or Dropping out of Schools in Kretek and Srandakan Districts

No	Districts	Employed	Unemployed	Total
1	Kretek	19	36	55
2	Srandakan	24	85	109
Total		43	121	164
Percent		25	75	100

Table 3. The Dropouts’ Interest in Entrepreneurship in Kretek and Srandakan

No	Interval Class	F	Percent	Category
1	97–128	70	40.6	High
2	64–96	90	58.6	Moderate
3	32–63	4	0.8	Low
	Total	164	100.0	

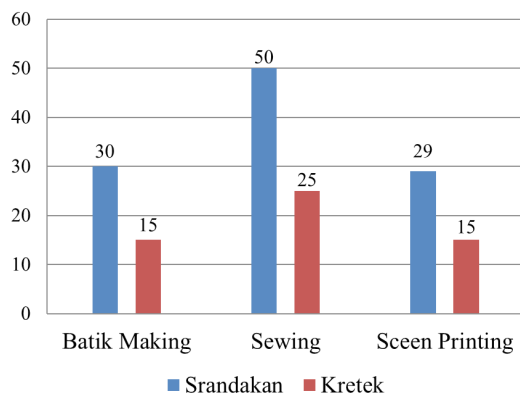


Fig. 1. LSE Selected Skills by Productive Age Dropouts in Two Researched Districts

It is apparent from the bar chart that teenagers' demands on the offered vocational skills are varied. Overall, the trend shows that sewing got the highest proportion of all, both in Srandakan and Kretek. In categorical terms, Batik making got 45 people, sewing achieved 75, and screen printing got 44 people.

Given the limited funds, research time, priority needs of community and teenagers and existing raw materials and market share, it was only possible to provide three types of LSE, namely batik making, sewing, screen printing. Prior to being given the materials of chosen skills, the participants were invited to attend training with materials on entrepreneurial spirit, career guidance for out of school adolescents, tips on entrepreneurship, fostering an independent entrepreneurial spirit and business management.

Tutor Training. The next measure to take prior to the implementation of the model would be providing competent tutors for the LSE programme. To achieve this, the researchers decided to first develop a module for the tutor training, carry out

recruitment and conduct tutor training, as well as to evaluate their learning. First, a team was formed for developing a module for tutor training through a series of development agenda including review by entrepreneurial experts. The developed module was in the form of books presenting materials on entrepreneurial spirit, entrepreneurship tips, career guidance, screen printing skills, batik making, and sewing skills.

Later, tutor recruitment was carried out in this study in accordance with the research objectives, while participants selected for tutor training were required to fulfil the following requirements. They had to: (1) be willing to voluntarily assist in the implementation of the LSE programme in the rural areas; (2) be concerned and interested in social welfare efforts for out of school adolescents in rural areas; (3) submit a letter of assignment from the local village official; (4) be willing to follow all activities related to education and development of the LSE model in the countryside voluntarily and with full responsibility; and, (5) have at least JHS education and be sympathetic to adolescent school dropouts. The tutor selection process resulted in 20 people consisting of community leaders and related parties insightful in empowering the potentials of rural communities, who would later act as a team of cadres for the continuous LSE programmes in the future.

Seen from the educational background, the selected tutors who handle entrepreneurship-skills education for school dropouts in productive age quite varied, from JHS to undergraduate. The overall level of education of the tutors in both sub-districts (Kretek and Srandakan) is presented in Table 4.

Table 4. Educational Background of the Selected LSE Tutors in two Districts

No	District	JHS	SHS	Diploma	Undergraduate	Total
1	Kretek	5	2	2	1	10
2	Srandakan	3	2	4	1	10
	Total	8	4	6	2	20
	Percent	46.6	20	23.3	10	100



At a glance, the table reveals that in Kretek, 5 out of 10 tutors graduated from JHSs (16.6%), 2 others were from SHSs (6.6%), two were diploma graduates (6.6%), while one person had undergraduate education (3.3%). Additionally, in the Srandakan district, four (13.3%) tutors had diploma education and two people had graduated from SHS (6.6%), 3 people were JHS graduates (10%), while one person had an undergraduate degree (3.3%).

Regarding the tutor training, various parties were involved in the programme. The coach team for prospective tutors in the LSE programme consists of several experts and related elements, namely entrepreneurial spirit (research team), entrepreneurship tips (research team), career guidance (research team), LSE model organisers (research team), fostering entrepreneurial spirit (research team), screen printing crafts (research team), sewing crafts (Department of Industry, Bantul Regency), batik crafts (Vocational Training Centre of Bantul Regency). The number of participants who took part in the training was 10 people from Kretek, and 10 people from Srandakan. The programme run for a month with a schedule of two meetings a week on Friday and Saturday 2-5 p.m. in Tirtomulyo Village Office, Kretek. The training materials provided to prospective tutors covered theory and practice of the entrepreneurial spirit, entrepreneurship tips, career guidance, management of LSE model, LSE model development, fund/capital development and management, its field implementation.

Following the completion of the tutor-training programme, the researcher conducted an evaluation of the programme. To find out whether the training carried out had a positive influence on improving the knowledge, attitudes and motivations of tutors in terms of entrepreneurship, pre- and post-tests were administered with materials consisting of those taught in the training, namely entrepreneurial spirit, entrepreneurship tips, business management, and entrepreneurial knowledge, skills, attitudes, motivation. The results of the pre- and post-tests can be seen in Table 5.

The data shows that the mean of both tests for all aspects achieved by participants from Kretek tended to be higher than those of the Srandakan district. In detail, we can see that knowledge improved significantly from pre- to post-test in both districts, accounted by a change of 39.2 and 25.4 points respectively and that tutors from Kretek achieved higher than did instructors from Srandakan. However, tutors in Srandakan got a higher gain score for the knowledge aspect. As for attitude aspect, those from Kretek obtained higher scores in both pre- and post-test, yet with the lower gain score of 3.1. Concerning motivation, both means of pre- and post-test in two researched districts were relatively lower than other mean compared to those of other aspects.

Discussion and Conclusion

As presented in the above section, it was found that, of 164 youngsters dropping out of schools in two researched

Table 5. Pre- and Post-Test Results of the LSE Tutors

No.	Aspect	Test	Srandakan		Kretek	
			Mean	Change	Mean	Change
1	Knowledge	Pre-test	68.8	39.2	88.9	25.4
		Post-test	108.0		114.3	
2	Attitude	Pre-test	85.6	3.2	86.8	3.1
		Post-test	88.8		89.9	
3	Motivation	Pre-test	84.5	1.9	79.7	9.2
		Post-test	86.4		88.9	
	Mean	Pre-test	79.4	15.0	85.1	12.6
		Post-test	94.4		97.7	

districts, most had low education, since they had either just graduated from SHS or had received no schooling. In this connection, a previous study proposes factors for adolescents dropping out of school in several domains, namely individuals, families, schools and communities [18]. The study mentions that escalating costs may impact on school failure rates including the increasing likelihood of becoming unemployed, committing crimes and being imprisoned [18]. Dropping out of school means leaving school without completing primary and junior secondary education. Student dropout problems are faced by all developed and developing countries in the world. In developing countries, dropout rates are generally rather high, even affecting elementary school children. A large number of children might complete secondary school education in many developed countries, but in the United States, more than one million students drop out of school each year, as stated by Latif [19] that seven thousand students in the US leave their schools in a day. This figure is similar to that of the Indonesian's, as the number of dropouts by sex and status of school in year 2017/2018, in both public and private schools in ES, JHS, and SHS subsequently were 32.127, 51.190, and 104.511 teenagers, with the higher percentages for males [20].

Moreover, this study also found that 75% of these 164 teenagers were unemployed and were merely involved in their parents' job as farmers, traders, or artisans. As observed, these adolescents wanted to work and get money for continuing their education. In order to be able to work, these teenagers should be equipped with essential business skills – communication, delegation, and finance [21] some of which were carried through life-skills education. Similar to this effort, an intervention study was conducted to young people who are studying in an economically retarded school belonging to the tribal community in Bharuch district, Gujarat Province of India. The study found that the programme helps students and empowers them to understand their physical changes better, build self-confidence and understand gender-related

problems; the researchers recommend that soft-skills programmes be included in the school curriculum [22]. Although the identified school dropout adolescents in this study had little in common with those in the mentioned research, the specific life skills education can be applied for the context of the current study. Life skills in the study area, consisting of sewing, batik making and screen-printing, were rather specific and tailored to the needs of the community in general.

In relation to the process of education, participants would be actively involved in a dynamic teaching and learning process. The pedagogy of life-skills education is based on cooperative learning, participative activities and experimental learning. The methods used to facilitate this active involvement included working in small groups and pairs, brainstorming activities, role-plays, games and debates. Life-skills lessons might start with a teacher exploring the students' ideas or knowledge about a particular situation in which a life skill can be used [23].

To conduct the programme with optimal results, experienced and skilled educators or tutors should be well prepared. If chosen and trained to deliver the necessary materials, it was assumed that these tutors would later continue learning with the mentioned qualities. As the offered skills had various responses from the prospective participants, in which sewing skills were proven to be the most-awaited LSE materials needed by the teenagers in both researched districts, the tutors were equipped with an eight-meeting training programme carried out over the period of one month. While there is not much research analysis, the relationship of individual attitudes, such as respect for education, impact on educational outcomes. Hillman et al. report that there is a relationship between positive student attitudes and their involvement with school and their achievements [24]. Moreover, attitudes were found to have a very positive correlation with the knowledge of training tutors.

To train prospective tutors, the main focus in training should be placed on acquiring knowledge. Here, knowledge is seen as equivalent to cognitive skills and



helping to influence intelligence, which allows the mind to take the lead and thus makes people more focused, objective and rational. These cognitive skills help people to become aware, know better than to just relax; exercise restraint, direct oneself rather than impulsively obey instinct; be a thinker rather than a conventional believer; be analytical, reflective and critical rather than easily fooled; be systematic, organised and planned rather than careless, unorganised, or emotional; be empirical rather than biased; be realistic and pragmatic rather than idealistic; be flexible rather than rigid; be broad-minded instead of narrow-minded; and be independent of conformists [25]. This is reinforced by skills other experts refer to as cognitive or thinking, including using thinking processes to solve problems by making decisions through critical and creative thinking. Creative thinking skills consist in the ability to produce something new and more valuable and to break away from old patterns. Critical thinking consists in the ability to draw strong conclusions about facts and observations, to analyse carefully and evaluate information. Decision-making skills consist in the ability to choose the correct action between alternatives. Problem-solving skills comprise the ability to solve problems efficiently [26].

Since motivation is interwoven with other aspects such as attitudes and self-esteem, it is difficult to synthesise an available body of evidence. At present, anyone with a single interest in improving educational outcomes for those most at risk will be advised to seek intervention elsewhere. However, there may be enough promise from the work that has been done, and enough evidence here concerning the relationship between extrinsic motivation and school outcomes. Further investigation through large-scale and rigorous trials can help to inform appropriate future interventions can be designed [27]. Cognitive, attitudinal and motivational competencies must be possessed by tutors in order to develop training approaches. The opinions of the experts above should be taken into account when considering approaches to improve the quality of the trainers.

Based on the data on the tutors' educational backgrounds, it is apparent that the level of education of tutors from Srandakan is higher (5 people had a diploma to an undergraduate degree) than that of Kretek's, where only three tutors had higher education. This means that there might still be low knowledge, skills or attitudes in the respective vocational skills. As presented in Table 5, it was found that these trained tutors had made some improvement in terms of knowledge, attitudes and motivations. From the study, the concept of PCK has brought a real contribution to the application of the action research since the knowledge of the training participants had improved significantly. It is expected that these results can have robust predictive power for the progress of trainees and the quality of teaching. In another study, Kurtner et al. add that PCK had a positive effect on participant motivation (measured through enjoyment questionnaires) [28]. Therefore, in order to improve the quality of training, investing in PCK for (prospective) trainers seems to be a good strategy. Although some experts have mentioned the sources of PCK, there is still little empirical evidence about how training can contribute to the development of PCK. Until now, it has not been clear whether the sources of PCK described above had been considered in intervention studies. In addition, it is not clear how intervention research on PCK is generally carried out.

The significance of this study is twofold. Firstly, (1) continuous LSE programmes to improve the business skills of teenage drop-outs should be carried out by managing and developing the qualifications of the tutors and by providing vocational skills training appropriate for their needs. Secondly, this provides an overview of intervention studies on PCK without being restricted to certain disciplinary domains. Because it is not very clear what elements should be included in the intervention to make it effective for PCK development, this study seeks to find out these effective elements by comparing several intervention studies. In contrast to previous studies on PCK sources, this study made a systematic analysis of studies aimed at developing PCK through educational interventions [29].

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