

# c6-OPPORTUNITY OF INDUSTRIAL DEVELOPMENT AND BUSINESS OF LEARNING MEDIA

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## OPPORTUNITY OF INDUSTRIAL DEVELOPMENT AND BUSINESS OF LEARNING MEDIA “COLORING BOOK AND PUZZLE” PENCAK SILAT

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**Abstract:** This research aims to produce puzzle Coloring Book learning media Pencak Silat to introducing basic technique pencak silat for early age and can be used as a teaching media for teachers or trainers as well as students in learning independence. Besides, coloring book and puzzle is an opportunity for the development of sports entrepreneurship. This research method is Research and Development with method approach of borg and gall. The subjects of the study were elementary school students. Data analysis with quantitative descriptive approach. Result of research and development was overall media of puzzle and Coloring Book of martial arts with material: step, defence, punch, elbow, kicks is categorized feasible use in learning pencak silat for early age with level of feasibility 81% and in terms of media feasibility equal to 72.5%. Based on field trials, the feasibility of puzzle media and pencak silat Coloring Book for students include: Material facet of 77% and facet of puzzle design and Book 76%. Overall the puzzle media Pencak Silat is worthy of use in the introduction of basic pencak silat techniques for early age. Coloring book and puzzle is very needed students in elementary school. In Indonesia there are many elementary school students, so the opportunity for the development of sports entrepreneurs is very large potential.

**Keywords:** Coloring Book and Puzzle, Pencak Silat, sport preunership.

### INTRODUCTION

In accordance with the existence of pencak silat is one of the cultural results of Malay clumps. The development of martial arts today can be proved by the increasingly crowded event, from elementary school, adolescent, adult even to multi-event sport in Asia and invitation of world championship. In multi-international multi-event, the general champion of pencak silat branch has been held by other countries, so it is enough to prove the progress has been progressing well in Asia and Europe.

The basic techniques in pencak silat include: (1) the defenses are: elastic shield, shadow, and *tangkisan*, (2) attack that is: punch, kick, fall, and lock, (3) bottom technique that is: bottom sweep, down, and clipping (Agung Nugroho, 2004: 5). In order to perform the technique properly and properly required good biomotor skills. For

that, the process of pencak silat coaching should start from an early age. Pencak silat learning process itself is still classical, so less effective when applied in early childhood. Classical learning also tends to be boring when applied to an early age. Here teachers or trainers must be creative and have a learning strategy in the delivery of martial arts materials to learners. The learning process occurs the process of delivering messages of teachers or trainers on learners. Here the role of instructional media is needed for the success of learning pencak silat. Method of mangajar or train early child should be fun and interesting to be followed by learners so no one when using concept learn and play in process of learning. Anggani Sudono (2000: 1) argues that if the understanding of play is understood and highly controlled, then that ability will have a positive impact on our way in helping children's learning process. Maybe

Sugianto (1995: 5) also points out that, from Frobel's experience as a teacher he realizes that play activities enjoyed by children and toys most favored by children can be used to attract attention and develop children's capacity and knowledge. In addition, in order to implement school based management (school based management) and active learning, so it is necessary to think of fun and interesting learning model for early age. Fun learning contains elements of play in learning activities. Learning model is intended to provide individual comfort for learners, so it is necessary a fun medium and can be motivated learners to help the process of delivering the message.

This development research intends to design the learning media to facilitate the introduction of basic techniques of pencak silat for early age. Learning media developed in the form of learning media puzzle and coloring book, which of course this object is not foreign anymore for teachers or trainers and learners. According to Patmonodewo, (in Misbach, Muzamil, 2010) the word puzzle and coloring book comes from English which means puzzle or unloading pairs, puzzle media and coloring book is a simple medium that is played by unloading pairs. Meanwhile, according to Big Indonesian Dictionary (2003: 352), puzzle and coloring book is a puzzle.

Puzzle and coloring book here developed with the concept so that children can learn while playing in the process of learning pencak silat so it is expected Puzzle and coloring book can be used as an alternative media in learning basic techniques pencak silat. By using Puzzle and coloring book, it is expected that teachers or trainers can make the learners to have independent character so that it creates meaningful and memorable activities for students. Nana Syaodih Sukmadinata (2006: 166) stated that, learning that emphasizes student activity motivates more motivation learning, high-order thinking, creativity, and independence.

Based on the description described above can formulate the problem how to develop the learning media Coloring Book and Puzzle in introducing the basic techniques of pencak silat for early childhood. This research aims to develop Coloring Book and Puzzle learning media in introducing basic pencak silat techniques

for early childhood. With the product specification that will be produced through this development research has the following specifications include Product development results in the form of coloring book with size 28x21 cm, consists of 19 techniques pencak silat base, which is given full color color and next to it in black and white, made of material plywood, which made a variety of design pieces, so that will stimulate the creativity of children. If the research is completed it will make it easier for learners to learn to understand and practice the basic techniques of pencak silat effectively and independently, facilitating the teacher or trainer in giving material about the basic techniques of pencak silat in addition to the classical or monotonous way.

### METHOD OF THE RESEARCH

This type of research is Research and Development Borg and Gall, using a ten step procedure in conducting development research. Research and development method is a research method used to produce a particular product, and test the effectiveness of the product (Sugiyono, 2011: 297). Research and development is an attempt to develop an effective product in the form of learning materials, media, learning strategies for use in schools, not to test the theory. According to Borg and (in Sri Anitah, 1983: 27) research and development is a process used to develop or validate the products used in education and teaching. The products produced in the development research include training materials for teachers or trainers, learning materials for learners, learning media to facilitate learning, processing systems and so forth.

The development of media programs is an effort to prepare and plan carefully in developing, producing and validating a media program. Media learning Coloring Book and Puzzle Pencak Silat. Learning media Coloring book is a media development by displaying various techniques packed in a book with one side there is a silk image fullcolor and the side of the black and white image that there is only the edge of the course, then students will color the image of the martial arts techniques. Puzzle learning media and coloring book Pencak Silat in research and development is a simple two-dimensional media that presents images of basic engineering materials in pencak

silat, designed so that learners are interested and happy with the concept of learning while playing, so as to increase motivation and interest of participants in learning or training. The result of this development product will be learning media in the form of Puzzle and coloring book. The basic material of pencak sillat material found in research and development of learning media of Puzzle and coloring book of Pencak Silat is the whole about basic technique material of pencak silat for early age. Validation of instruments for material experts and media experts.

### RESULT OF DEVELOPMENT AND DISCUSSION

The preliminary research was conducted by observation, interview to the respondent (pencak silat trainer of SD-SMP Budi Mulia Dua Yogyakarta), looking for books as reference, looking for relevant result as reference of researcher, taking photographs from learner to put together in product to be developed . From the preliminary research, found some things as follows: 1). The trainer expresses the characteristics of learners who

prefer the learning model with the game. 2). Trainer states need to be developed learning media so that learners can do motion effectively and efficiently and can spur creativity of learners. 3). The trainer states that the learner is more enthusiastic at the time of learning by giving the game in it. 4). The trainer stated that it is necessary to develop instructional media that can clarify the learning materials and can accelerate the learning process.

The development of instructional media and the practice of puzzle and coloring book is validated by the experts in their field, namely the expert of learning media and Pencak Silat material experts. Data on the Results of Media Assessment "Puzzle and coloring book Pencak Silat" by Media Expert declared feasible 76%, and from Eligible Material experts (75%). In the second stage of validation percentage obtained increased from 67% to 78% of the maximum score. Thus it can be stated that according to media experts, in the validation stage of both learning media puzzle and coloring book and pencil silat coloring book developed from the content feasibility aspect get the "eligible" category.

#### Product Results After Revision



Picture. Puzzle display and coloring book After Final Revision

The effectiveness test result on the puzzle media and coloring book of pencak silat shows the judgment about the material aspect of 77% which is categorized as feasible and for the facet of card design equal to 76% which is categorized as feasible. The total assessment of feasibility test of puzzle media and coloring book of pencak silat according to the respondents of 6-9 year old students by 77% is categorized as feasible.

## DISCUSSION

In the early development of puzzle and coloring book is designed and produced into an early product in the form of puzzle and coloring book pencak silat to introduce basic pencak silat technique for elementary school students of 6-9 years old. Development process through research and development procedures. Through some planning, production and evaluation. Then the product is developed with the help of photoschape, photoshop CS6, and corel draw, after the initial product is produced then need to be evaluated to the experts through validation and need to be tested to the students. The evaluation stage is performed on material experts and media experts. While the research phase is done by small group trials and field trials.

The material expert validation process generates data that can be used for revision of the original product. In the process of validation of this material expert the researcher uses two stages of phase I and phase II. The first stage validation data is used as the basis for revising the second product. Upon completion of the second revision the product is ready for trial. Upon completion of the validation of the material expert, validation is immediately validated to the media expert. From media experts obtained data, suggestions and feedback to improve puzzle and coloring book pencak silat being developed. In the process of media validation of the researcher through two stages of phase I and phase II. The first stage I media validation data was used as the basis for revising the second product. After completion the second revision is validated again until the product is ready for testing. The trials were conducted in two stages, ie small group trial stage, and field trials. After the final revision, the final product is ready to be used by the students for learning media in learning basic pencak silat

technique and learning independently and assisting the teacher or trainer in giving information to the students especially learning the game of pencak silat.

The quality of the puzzle and coloring book of pencak silat belonging to the "Eligible" criteria of the statement can be proved from the results of the "Eligible" assessment analysis of both the expert material and the media expert, and field trials. Students are happy with this product because they are interested to learn and hope this product can be disseminated to other students. Puzzle games and coloring book on this learning media to attract participants' motivation to learn basic technique of pencak silat.

There are some things that students think are the advantages of this product. Among them is the appearance of martial art drawing techniques with cartoon design make puzzle and coloring book pencak silat become interesting and liked by students, also pieces of each puzzle and coloring book different basic techniques to make students more enthusiastic try puzzle and coloring book stacking game. Student interest in pencak silat learning media is a symptom that can improve the learning process. This product also allows students to be motivated to learn actively and independently because this product is easy to use.

In addition to the advantages of this product, while the weaknesses in this product, including the level of student creativity in the game is not good, it should be for the type of puzzle game and coloring book students must be creative in finding suitable pieces and sequential so easy in preparing the puzzle and coloring book. With these weaknesses, further attention and development efforts can be made to obtain better product results. This fact will open up opportunities for continuous subsequent revamping. Test results can be described in the following discussion: 1. Testing to the material expert; The result of the questionnaire test to the material expert shows the relevance level to the material of 81% which means that the material contained in the media of puzzle and coloring book of pencak silat is suitable for use in the field study. 2. Testing to media experts; The result of questionnaire test done to media expert showed 72.5% media feasibility level, meaning that the media of puzzle and coloring book of pencak silat is feasible to be used

in pencak silat learning with the revision included on the facet of puzzle and coloring book.

3. Testing to learners; a). Small group trial The result of questionnaire of early age students about the media of puzzle and coloring book of pencak silat shows that for judgment about 74% material aspect which is categorized quite feasible and the design aspect of puzzle and coloring book is 70% which is categorized quite feasible. The total assessment of feasibility study of learning media of puzzle and coloring book of pencak silat according to the respondents of learners aged 6-9 years by 72% is categorized quite feasible which can be interpreted that the media is quite feasible to be tested to next stage. b). Field trials The result of the questionnaire test of students concerning the media of puzzle and coloring book of pencak silat shows the judgment about the material aspect of 77% which is categorized as feasible and for the design aspect of the puzzle and coloring book equal to 76% which is categorized as feasible. Total assessment of media feasibility test of puzzle and coloring book of pencak silat according to the respondents of learners aged 6-9 years by 77% categorized worthy. Analysis of Pros and Cons of Media; After going through a product trial (small group and field) it can be described the advantages and disadvantages of learning media.

1) Excess media:

- a) Can be more motivating peserta learners so that the exercise becomes the spirit, b). Sharpen the creativity of children to be able to arrange the puzzle and coloring book. c). It is very interesting for children to practice while playing. d). More ease the trainer's duty in training. e). Children become more active in the training process.

2) Media shortage:

- a) Disadvantages in this media are motionless images that sometimes make learners still have to wonder to ask for coach guidance.
- b) The cartoon design used in the puzzle and coloring book of pencak silat makes the basic engineering detail shown less than optimal. c). The procurement of puzzles and coloring book pencak silat is still relatively expensive in terms

of media production. Analysis of Learning media perspectives introduction of basic pencak silat techniques for early age before using puzzle learning media and coloring book pencak silat still classic tends to be boring for early childhood during learning. Learning media puzzle and coloring book pencak silat in design with the concept of learning while playing so hopefully learners do not feel boredom and can increase the motivation peserta students in learning pencak silat.

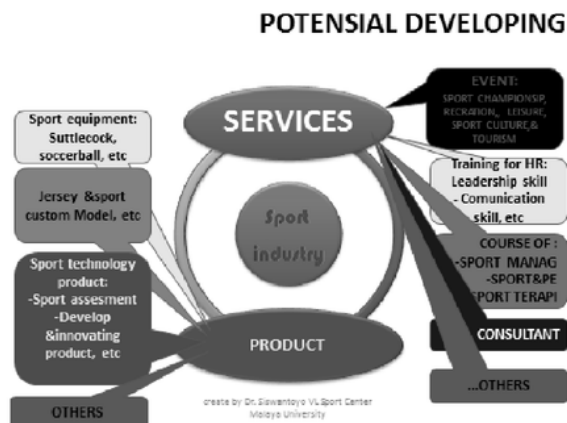
From the analysis of learning media puzzle and coloring book pencak silat during product trial can be described as follows:

1. Students or learners:
  - a. Learners are more motivated and do not experience boredom through the game of learning media puzzle and coloring book pencak silat, pencak silat basic material is more easily understood and learners more spirit to demonstrate the basic technique movements pencak silat.
  - b. Learners are more active and creative in using puzzle and coloring book pencak silat with a form of game that is very interesting for them.
2. Trainer or teacher:
  - a. Trainers or teachers are more time efficient in training, the media is designed so that learners can learn pencak silat independently at home.
  - b. Trainers or teachers more easily manage the students, with this medium the trainer or teacher is easier to manage the exercises with the characteristics of children who are active and likes to play.

Utilization of learning media puzzle and coloring book pencak silat in the introduction of basic techniques of early age pencak silat still experience obstacles. Images that have not moved sometimes make students still ask the coach to be guided. In the future learning media puzzle and coloring book pencak silat is expected to be more refined.

### Analysis of Industry Opportunities and Sports Business

Puzzles can be made with the material from acrylic, wood or plastic plates, colored and given drawings of martial arts techniques, which can be quickly disassembled. While the coloring book is a book that contains pictures of martial arts techniques with full color images to imitate and black and white images to mimic coloring like full color images. Opportunities for industry are producing varied puzzles with various techniques of martial arts. Besides, coloring book is an opportunity to produce, socialize, and make coloring event. Based on the potential opportunities of industrial development and sports business can be seen in the picture below.



When analyzed the need and demand obtained the assumption that the need for such products is very large, because in Indonesia in 2016, the number of schools in Indonesia reached 297,368 units. Primary School is the level of education with the highest number of schools, reaching 147 thousand units. As for playgroup schools are also more numerous. Based on data from Sapulidi Research Center (SRC) as per January 2016, the number of playgroup schools institutions throughout Indonesia reaches 190,238 institutions. Consisting of kindergartens 80,140 institutions, Playing Groups 78,056 institutions, Childcare Park 3,473 institutions, and Similar Early Childhood Units 28,569 institutions. The data is an opportunity to develop a highly prospective industry and learning media business. Thus if this product can be spread in each school 100 packets, it must provide

products in the number of thousands of packages. This will educate the public in the field of edu-preunership.

### CONCLUSION

The learning media of puzzle and coloring book of pencak silat which has been developed in this research deserves to be used as media of increasing knowledge about basic technique of pencak silat for early childhood (6-9 years). In addition, the results of the assessment of learning media puzzle and coloring book martial arts as a whole, learning media puzzle and coloring book pencak silat with the material of step, defence, punch, elbow, kicks is categorized quite feasible for use in learning pencak silat for early age with a feasibility level of 81%, and from the media aspect categorized as feasible with a feasibility level of 72.5%. Overall learning media puzzle and coloring book pencak silat is feasible to be used in the introduction of martial arts for an early age after going through several stages of testing. This development research has been achieved for use by teachers or trainers in teaching basic pencak silat techniques to learners. In Indonesia, the education of early childhood and primary school is very much, even reaching hundreds of thousands of children. Coloring book and puzzle is needed for playgroup, kindergarten and elementary school students to improve the cognitive abilities and psychomotor children in a very large number, so this is an opportunity to develop sports industry and sport preunership.

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