An Introductory Book For Coaching Athletes With A Disability

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Abstract—The purpose of this study was to identify the ideal book for preparing students to learn of disability sport. The benefit of this research is that after finding out the ideal book, the results of the study will be used for further research, namely developing an introductory sports disability book. This research used the survey research method. The survey was conducted on 60 students at the Faculty of Sports Sciences, Universitas Negeri Surabaya and 2 experts in the field of disability sports. Data collection tools in the form of questionnaires, checklist sheet, and interview guidelines. This research has succeeded in getting very detailed data and information that needed and the result will be used for further research, namely developing introductory book for coaching athletes with a disability.

Keywords—disability sports coaches, disability sport, introductory book, sports science

I. INTRODUCTION

Disability sports are a relatively new phenomenon. In the context of social inclusion, the attention of politicians and academics towards disability sports has increased [1]. Although in the realm of disability it is usually only discussed in the medical profession.

The strength of the medical profession is its ability to determine and explain illness and its ability to heal injuries and heal illnesses. This has placed it in a strong position to provide discourse in various areas of life-related to the body and mind including disability [2]. The medical profession works from a biological perspective and this causes disability to be understood only as a biological problem. Therefore, the general view is that problems faced by people with disabilities are the result of their physical and / or mental disorders and are not dependent on the social-cultural, physical and political environment [2].

In the education environment, there is thought that trainers who have never worked with athletes with disabilities feel that they need very specific skills, knowledge, or training. This is a wrong perception. In fact, most coaches who work with athletes with disabilities soon find that coaching these participants is fundamentally no different from coaching other athletes. The challenge is to truly understand the person, to focus on their abilities, and to see what they can achieve [3].

Achievement of athletes with disabilities can also be high, but it requires assistance from coaches to optimize their potential and cover the limitations of athletes to achieve the highest achievements. The behavioral relationship between coaches and athletes with disabilities has a significant influence on the motivation and achievement of athletes [4]. It is now widely recognized that athletes with disabilities compete at an elite level that is parallel to those experienced by athletes who are not disabled [3].

Sport is an element that is rooted in culture, and the ability to participate in the world of sports is valued by society as a health and recreational benefit, or both. However, the ability to participate in sports may not be available to people with disabilities, because they generally face far greater obstacles to access appropriate sports facilities than athletes who are not disabled [5].

As we know it, research in the field of coaching athletes with disabilities is still lacking compared to non-disability sports. That’s why this research explores the analysis of the need for the ideal book needed for training disabled athletes. The results of the study will be used as a reference for developing an introductory book for coaching athletes with disabilities.

II. METHOD

There are two main data to be obtained, namely the characteristics of disability introductory sportsbooks and the content of disability sports introductory books in this study. For this reason, two approaches are used, namely quantitative and qualitative. Data on the characteristics of introductory books on disability sports is obtained through the results of questionnaire answers given by students. There were 60 students who were the subjects of the study which consisted of four classes of students majoring in sports training education which were still active including the class of 2015, 2016, 2017, 2018 where each class consisted of 15 people. While the selection of 15 people in each batch uses a random sample technique.

The questionnaire used in this study uses a Likert scale to determine the attitude of the research subjects related to the characteristics of the book desired by students. The questionnaire has been tested for validity and reliability so it is feasible to be reused on other research opportunities. The questionnaire results were analyzed using percentages.

Related to data about the contents of the introductory sports disability book, it is obtained through quantitative and qualitative approaches. Research subjects for the contents of the book are two disability sports experts selected by purposive sampling techniques. The criteria used to select research subjects are 1) individuals who have been in the world of disability sports for more than 10 years, 2) have experience in training athletes with disabilities, 3) Involved in the level of management of disability sports organizations at the provincial level.

Quantitative data were obtained through filling out a Gutman scale checklist sheet consisting of 13 sub material items which can be selected by disability sports experts. The
results of the answer checklist sheet were analyzed using percentages. Meanwhile, to dig deeper data related to the contents of the introductory book on disability sports, interviews with open-ended questions are used to obtain additional answers related to the contents of the book. Data from the interviews were analyzed by entering the answer categories in the same sub-material group and adding new sub-materials if needed.

III. RESULT

A. Characteristics of Introductory Sport Disability Book

To find out the characteristics of a disability introductory sports book desired by students, a survey of 60 students majoring in sports training education - the Faculty of Sport Sciences - Surabaya State University consisted of 61.7% men and 38.3% women. The sample in this study consisted of four classes that are still actively undergoing lectures at this time, namely students from 2015, 2016, 2017 and 2018 where each class consisted of 15 people.

**TABLE 1. BOOK CHARACTERISTICS DESIRED BY STUDENTS**

<table>
<thead>
<tr>
<th>No</th>
<th>Question</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>1</td>
<td>Display of cover books have an impact on interest in reading</td>
<td>63.3</td>
</tr>
<tr>
<td>2</td>
<td>The thickness of the book page has an impact on reading interest</td>
<td>13.3</td>
</tr>
<tr>
<td>3</td>
<td>The typeface affects reading interest</td>
<td>26.7</td>
</tr>
<tr>
<td>4</td>
<td>Use language that is simple and easy to understand in books</td>
<td>50</td>
</tr>
<tr>
<td>5</td>
<td>The example in the book is related to daily life</td>
<td>55</td>
</tr>
<tr>
<td>6</td>
<td>Use of standard language and scientific articles in books</td>
<td>15</td>
</tr>
<tr>
<td>7</td>
<td>Use of pictures/photos in books</td>
<td>53.3</td>
</tr>
<tr>
<td>8</td>
<td>Use of tables and charts in books</td>
<td>10</td>
</tr>
<tr>
<td>9</td>
<td>Use of glossaries in books</td>
<td>21.7</td>
</tr>
<tr>
<td>10</td>
<td>Books are written without summaries</td>
<td>0</td>
</tr>
<tr>
<td>11</td>
<td>The use of practice questions in the book</td>
<td>30</td>
</tr>
<tr>
<td>12</td>
<td>Essay exercises</td>
<td>18.3</td>
</tr>
<tr>
<td>13</td>
<td>Practice questions in the form of multiple-choice</td>
<td>30</td>
</tr>
<tr>
<td>14</td>
<td>Use of the answer key in the book</td>
<td>28.3</td>
</tr>
<tr>
<td>15</td>
<td>The book is printed out</td>
<td>33.3</td>
</tr>
<tr>
<td>16</td>
<td>The book is made in the form of soft file/ebook</td>
<td>10</td>
</tr>
</tbody>
</table>

Data on characteristics of introductory books on disability sports were obtained through a questionnaire with a Likert scale. Based on the results of the validity and reliability test by using IBM SPSS Statistics Data Editor version 22, from the 33 initial question items, finally obtained 16 question items that have a validity value greater than the t table value of 0.2144 at the 0.05 significance level. While the reliability test results obtained a value of 0.707 which indicates this questionnaire is feasible to use with the reliability level in the strong category. The final results of the questionnaire questions and answers are listed in table 1.

Based on table 1, it’s known that characteristics of an introductory sports disability book desired are book with cover appearance that attracts attention (98.3%), the number of pages to desired (75%) attractive typeface (76.7%). Besides that, books are also written in simple and easy to understand language (100%), by giving examples in accordance with the facts of daily life (100%), but by still incorporating standard language elements and the use of scientific journals (78.3%).

To improve understanding, the majority of students prefer to use pictures (98.3%), tables or charts (73.3%), glossaries (78.4%) and summaries in books (73.4%). Meanwhile, to test the understanding of students, it is important to have question exercises in the book (96.7%), it can be in the form of essays (78.3%) and multiple-choice (78.3%) which are equipped with answer keys (88.3%). Books with all the characteristics required by the students mentioned above can be made in the form of printouts (90%) and or in the form of ebook / soft files (75%).

**TABLE 2. CONTENTS OF THE BOOK**

<table>
<thead>
<tr>
<th>No</th>
<th>Material</th>
<th>Percentage of Expert Approval (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Definition of disability sports</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>History of disability sports in the world</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>History of disability sports in Indonesia</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>Types of disability sports organizations in the world</td>
<td>50</td>
</tr>
<tr>
<td>5</td>
<td>Type of disability sports organization in Indonesia</td>
<td>50</td>
</tr>
<tr>
<td>6</td>
<td>Types of disability sporting events in the world</td>
<td>100</td>
</tr>
<tr>
<td>7</td>
<td>Types of disability sporting events in Indonesia</td>
<td>100</td>
</tr>
<tr>
<td>8</td>
<td>Distribution of types of disability</td>
<td>100</td>
</tr>
<tr>
<td>9</td>
<td>Classification in disability sports</td>
<td>100</td>
</tr>
<tr>
<td>10</td>
<td>The athlete’s learning style is based on the type of disability</td>
<td>100</td>
</tr>
<tr>
<td>11</td>
<td>Achievement motivation for athletes with disabilities</td>
<td>100</td>
</tr>
<tr>
<td>12</td>
<td>Nutrition for disabled sports athletes</td>
<td>50</td>
</tr>
<tr>
<td>13</td>
<td>Basic principles that must be possessed by disability sports coaches</td>
<td>100</td>
</tr>
</tbody>
</table>

B. The Contents of an Introductory Sports Disability Book

To find out what important things that should be listed in the introductory disability sportsbook, a consultation with a disability sports expert has been experienced in the world of disability sports in East Java for...
Based on Table 2, it can be concluded that there are some main materials that must be included in the introductory book on disability sports, namely the understanding of disability sports, types of disability sports events in the world and in Indonesia, the distribution of disabilities, classifications in disability sports, athlete learning styles based on the type disability, achievement motivation for disabled sports athletes and basic principles that must be possessed by disability sports coaches. These materials, according to experts, are very important and fundamental things that must be understood by students who will learn about disability sports. Furthermore, material about the history and types of disability sports organizations in the world and in Indonesia, as well as nutrition for disabled sports athletes is more options which can be added or not raised in the book. In addition, disability sports experts recommend additional sub material that appears in the book, namely on legislation related to disability sports, disability sports physiology and disability training planning. The material is considered important to be studied for students who later become candidates for disability sports trainers.

IV. DISCUSSION

A. IDEAL BOOK CHARACTERISTICS

In books with the type of print book, the choice of reading books is apparently influenced by the color of the cover, especially for women ages 18-35 [6]. Unlike the type of digital books or ebooks, in choosing books quickly the reader not only pays attention to the cover but also pays attention to the brief description in the book, title and also the bibliography [7]. By reading the information quickly, she/he will decide that the book is important or not to read. This is an important note in the preparation of a book, both textbooks, and digital books.

In addition to the cover, the thickness of the page or the lightweight of a book also affects the mindset of the reader towards the impression of a book. For books with substantive material, thick books are considered more important and weighty, but this does not apply to books with material that is not substantial [8]. So it is also necessary to pay attention to the thickness and severity of a book because it also brings its own impression to the readers.

In the preparation of a book, the selection of type and size of letters is something that must be considered. The choice of fonts must be done carefully so that the information conveyed can be carried out attractively and effectively [9]. With the right font type, it can make the reader comfortable and interested in reading a book for a long time. In addition to the selection of fonts, the case of letters must also be well watched. The size of the letters also affects the effect of individual learning, where generally people are more focused on larger letters [10]. So the use of large letters can be used to highlight the main things that need emphasis and other things that are the center of attention for the reader. The use of capitalization also needs to be properly limited so as not to obscure the purpose of capitalization. The proportion of the size of the letters needs to be well considered so that the intentions and objectives to be conveyed by the author really reach the reader.

To facilitate the understanding of readers, books can be arranged using language that is simple and easily understood by the general public. In addition, the use of examples related to daily life also makes it easier for readers to understand books well. This is consistent with the type of contextual learning that links learning the material with everyday life forms to improve understanding. Research shows that students have a positive attitude towards the application of learning models with a contextual approach [11].

Furthermore, the use of images in books has a significant impact on improving understanding compared to books that only consist of writing [12]. But the use of images also needs to be considered carefully. The use of images for learning will be optimally used for knowledge related to space and or place, for example, maps [13]. In some conditions, images can be processed more easily than words. Images are able to relate strongly to semantic information so that it is easier to process than text [14]. In compiling books, it is important to have a literature review that is a source of reliable scientific studies. There are various sources cited and presented comprehensively in the literature review where finally conclusions can be drawn based on the results of the citation [15]. It also can add a summary at the end of the chapter or the end of the book that is used to help the reader to learn more.

The summary is used to review the main ideas of the material that has been presented so that there are opportunities for students to remember the material that has been presented. So the summary is a component of a strategy that covers all the contents of an important field of study, such as understanding a brief understanding of the concepts, procedures, or principles learned [16]. The use of summaries is something that can be given in the learning process to recall important information that has been learned previously. The results showed that students agreed that the use of summaries was useful and very helpful in the learning process [17].

In testing the ability and learning outcomes, essay and multiple-choice questions are the types of questions most widely used in the teaching and learning process. Essay and multiple-choice questions have advantages and disadvantages of each. Essay questions are more associated with freedom of answer but are based on knowledge, while multiple-choice questions are associated with greater answer choices and chances of success than essay questions [18].

In working on multiple-choice questions, students are more comfortable working on multiple-choice questions on paper compared to examinations using an electronic system. This is due to concerns regarding the format of electronic examinations when students work on multiple-choice questions with an electronic system [19]. So it is important to note that if an exam with a type of multiple-choice questions is carried out with an electronic system, it is necessary to ensure that the system has been properly tested and the system works smoothly so that this can reduce student concerns related to the test with the electronic system.
When compared between types of multiple-choice questions and essays, psychology students prefer exams with essay type questions rather than multiple-choice questions [20]. However, the characteristics of other students can be very different because each department or program of study has a different learning tendency pattern that greatly impacts the preferred pattern of choice of questions.

Problems with the type of essay often complain of a long and biased examination and assessment process, but the use of technology can be optimized to overcome this. The use of NetSupport School, Word, DOS, and Excel computer software can be done to prepare, organize and assess the results of student responses [21].

At this time the book is available not only in printed form but also in the form of an ebook or soft file. Books in printed form have the advantage of being low in radiation and are easy to carry without electronic devices. While the ebook has the advantage of minimal costs and saves space because it is not available in real form. When compared, both have their advantages and disadvantages. Comparison results at a university show that students at the undergraduate level prefer to use printed books rather than ebooks [22]. But added that for the type of book with the same profile, more ebooks are chosen, while for material that is substantial then the reader prefers printed books[23].

B. Sports Disability

Studies in the United Kingdom show that students do not understand the purpose of learning history in school [24]. In this regard, it is important for the teacher or lecturer to provide an understanding of the purpose and benefits of learning about historical material at the beginning of the meeting so students understand well the positive things that are obtained by learning history. Students will certainly be more interested in learning this if the benefits can be linked to everyday life forms or contextual matters. By studying the history of disability sports in the world and in Indonesia, students are expected to obtain meaningful learning that can be learned for their daily lives to be applied in the field of disability sports.

In disability sports, there are many sports in paralysis events. Paralympics are the highest multi-event sports disability in the world that is parallel to the Olympics. There are two types of Paralympics, namely summer and winter Paralympics. Summer Paralympics consist of 22 types of sports: archery, athletics, badminton, bocce, canoe, cycling, equestrian, 5-side football, goalball, judo, dance sports, powerlifting, rowing, shooting sports, sitting volleyball, para-swimming, table tennis, taekwondo, triathlon, basketball wheelchair, wheelchair fencing, wheelchair rugby and tennis wheelchair. Whereas the winter Paralympics consists of six sports: alpine skiing, biathlon, cross-country skiing, ice hockey, snowboarding, wheelchair curling [25].

The disability sports mentioned above compete in the highest level of multievent disability sports in the world, namely the Olympics. The event is held every four years, where the upcoming Paralympics will be held in 2020 in Tokyo, Japan. Disability sports events which are one level below the Paralympics, namely multievent disability sports on each continent. Specifically, on the Asian continent, the largest multievent disability sport in Asia is called the Asian Para Games. This event is also held every four years where the next Asian Para Games will be held in China in 2022. Furthermore, below the Asian level, there is an Asian regional level. In Southeast Asia, the multievent is called Asean Para Games, which is held every two years. In the next period, the ASEAN Para Games will be held in the Philippines in 2020.

Various types of multievent disability sports can be followed by athletes in accordance with their respective sports. Each sport has different characteristics from each other, where it is very possible that there are different types of disability in each sport. In simple terms, the division of disability can be divided into three namely athletes who experience visual, intellectual and physical impairments [26]. To be able to train well, the coach must understand well about athlete disability. The higher the level of disability an athlete has, the coach needs to have extensive knowledge of the type of disability [27].

If the coach has extensive knowledge related to the level and type of disability of the athlete, this will be very helpful in the classification process. The purpose of the classification is to determine the athletes who may or may not compete in one of the sports and ensure that they meet the minimum disability determined to compete in the sport [28]. Each sport has different classification rules for each other. The type and level of disability an athlete is permitted to take part in a match or race has been regulated in detail in the classification rules [29].

In addition, knowledge about sports nutrition is important for trainers and athletes with disabilities to understand. Adequacy of nutrition is one of the factors that cannot be underestimated in supporting sports performance. Research shows that a significant relationship between the incidence of dehydration in athletes with low knowledge about nutrition [30]. Therefore knowledge about nutrition must also be well understood by athletes and especially coaches.

To be able to train athletes well, the coach must understand the athlete's motivation regarding his involvement in disability sports. Athletes can excel in sports with disabilities, of course, thanks to both intrinsic and extrinsic motivation. Achievement motivation of athletes with disabilities includes self-confidence, confidence in one's abilities, coach's encouragement, and bonuses and rewards [31]. In addition, it is necessary to know that elite athlete with disabilities have similar experiences and needs to elite athletes in general sports [32]. Based on this, by understanding the specific motivations of the athlete, the coach can search and find the right approach to help the athlete's career success.

To be a disability sports coach is not easy. Therefore the importance of mentoring for candidates for disability sports trainers through structured education with career development [33]. That is because to become a disability sports coach, the coach must be able to face difficult situations when working, communicating, interacting for the first time with a disability sports athlete [34]. In addition, the ability to listen, talk and solve problems related to athletes with disabilities [35]. Therefore this introductory sports disability book was prepared to help prospective disability sports trainers to be able to learn and recognize the characteristics and uniqueness of disability sports, where
this information can be used for the process of training disabled sports athletes in the field with the approach and application of sports coaching, particularly in the disability sports field.

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REFERENCES