

Business Strategy for the Development and Marketing of an HTML 5-based Learning Application for Children with Dyslexia

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ABSTRACT

Dyslexia is a reading and spelling disorder that affects children's learning ability. Technology-based learning applications have great potential to help dyslexic children overcome learning challenges. The development of HTML5-based learning apps for children with dyslexia has great potential to improve the quality of their learning. However, the success of this app depends not only on the technological aspects, but also on a well-thought-out business strategy. App development should consider the needs and preferences of the end-users, namely children with dyslexia. Features that support differentiated learning and interactive introduction of material are very important. The marketing strategy should focus on the right market segment and craft relevant messages. Effective communication to parents and educators about the benefits of the app is also an important factor. A sustainable business model must be formulated. Options such as subscriptions, direct sales, or a combination of both should be analyzed taking into account long-term financial aspects. Competition analysis and uniqueness of product value should be clear. The app should be able to compete with similar products and offer added value that sets it apart. This research shows that the development and marketing of an HTML5-based learning app for children with dyslexia requires a well-thought-out business strategy. The success of the app depends not only on the quality of the technology but also on how it is positioned in the market and received by the end user. By combining technology, education, and business elements, this app has the potential to make a positive impact in assisting dyslexic children in the learning process.



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INTRODUCTION

Education is an important foundation in the formation of competitive individuals and societies ([M. Pd 2022](#)). However, specific challenges such as dyslexia can affect children's learning ability, hindering their academic development and full potential ([Rahmadania, Sitika, and Darmayanti 2021](#)). Dyslexia is a neurobiological disorder that affects the ability to read, spell and write, even if the child has normal intelligence and receives adequate education ([Surayya and Mubarok 2021](#)). Therefore, efforts to provide effective and inclusive support for children with dyslexia are becoming

increasingly important ([Rahmawati et al. 2022](#)).

In today's information technology era, technology-based learning applications have become a tool capable of revolutionizing the way children learn ([Prabowo, Ardiansyah, and Yusman 2021](#)). In particular, web technologies such as HTML5 enable the development of interactive and adaptive learning applications, which can be accessed through various devices. However, there is still a huge untapped opportunity in developing suitable educational solutions for children with dyslexia ([Toffalini et al. 2021](#)).

In line with technological advances and the need for inclusive education ([Sholjakova 2019](#)), this research explores business strategies in the development and marketing of an HTML5-based learning application specifically designed for children with dyslexia ([González-Gómez and Jeong 2019](#)). This innovative approach aims to provide a solution that supports differentiated learning needs, while providing sustainable business opportunities.

Through the integration between the fields of education, technology and business, this research will analyze the critical steps in developing and marketing such an app ([Sardjono and Nuriana 2021](#)). In the face of the complexity of dyslexia challenges, a well-thought-out business strategy is expected to lead to the development of effective learning apps, improved educational accessibility for children with dyslexia, as well as potential business opportunities ([Hietala and Päivärinta 2021](#)). The use of HTML 5 technology as a basis for developing interactive and inclusive learning applications is a relatively innovative concept. This research will explain how this technology can be used to create a learning environment that better suits the needs of children with dyslexia ([Beers et al. 2019](#)). The learning limitations experienced by children with dyslexia are the main focus of this research. Little research has specifically focused on developing HTML 5-based learning applications for this group ([Kaimara et al. 2019](#)).

The use of HTML 5 technology as a basis for developing interactive and inclusive learning applications is a relatively innovative concept. This research will explain how this technology can be used to create a learning environment that better suits the needs of children with dyslexia. The learning limitations experienced by children with dyslexia are the main focus of this research. Little research has specifically focused on developing HTML 5-based learning applications for this group. The results of the research are expected to produce an interactive and adaptive HTML5-based learning application, specifically designed to meet the needs of children with dyslexia. The app is expected to help them overcome barriers in reading, spelling and learning in a fun and effective way.

METHODS

Library research techniques are employed in this study; this phrase refers to a group of methods for collecting data from libraries, such as classifying books and taking notes. The canon stipulates that the researcher should think about the following four factors: First, researchers who have to work with text (nass) or numerical data directly

but don't have any background in the respective fields. Since the researcher is interacting with the data source at the library rather than in the field, he or she lacks first-hand familiarity with the topic. Third, it's important to remember that much of the data available in libraries is secondary in nature, meaning it wasn't the first information gathered on a given topic. Whether you have five minutes or five years, there will always be something of interest to read in a library. Because of the foregoing, researchers frequently read and investigate a wide range of journals, books, papers, and other sources of information and data they deem relevant to their studies and research.

RESULTS AND DISCUSSION

The Nature of Learning

Learning is the process of gaining information from a variety of sources with the intention of improving one's knowledge, abilities, and character. Students might be the ones who learn, while teachers can play the role of facilitators. The learning process itself is the most crucial part of any educational endeavor. Reading is a skill that a kid develops over time, beginning with phonics and letter recognition, and progressing to word recognition and comprehension.

Teacher Competence

Indonesia's educators are at the vanguard of the country's educational infrastructure. Education's future depends on the efforts of its educators. Educators are those who work one-on-one with pupils to help them grow as learners. In order to produce students who excel intellectually, professionally, emotionally, morally, and spiritually, educators play a crucial role. All of this requires a teacher who is fully capable of and enthusiastic about carrying out his responsibilities.

There are five professional competencies, and they are as follows: 1) mastering the subject matter's underlying material, structure, concepts, and patterns of scientific thinking; 2) mastering the subject's basic competencies; 3) developing subject matter that is taught creatively in the learning process; 4) developing professionalism in a sustainable manner by taking reflective action; and 5) using information and communication technologies in the classroom.

The mandate of the 2013 curriculum (Permendikbud number 103, 2014) that learning be conducted through activity with the following characteristics: (1) interactive and inspirational; (2) fun, challenge, and motivate students to participate actively; (3) contextual and collaborative; (4) provide sufficient space for student initiative, creativity, independence, and (5) according to students' talents, interests, abilities, and physical anatomical and psychological characteristics. Approaches, strategies, models, and procedures are all used in the KBM process that are based on the aforementioned traits.

Direct learning model (Direct Instruction)

The learning model serves as a template for KBM planning because it is a strategy or

plan. Defines a model as "a general pattern of learning behavior with the aim of achieving the expected competency or learning goals." The direct instructional model is the way that is most effective in teaching concepts and skills that are explicit to students who are underachieving though. States that the direct learning model is one of the teaching approaches tailored to aid students' acquisition of declarative knowledge and well-structured procedural knowledge that can be taught with a sequential set of activities. gradual increments. Previous research found that when the direct instruction style is used in the classroom, students are more engaged in the learning process and achieve a 95% positive outcome. There are five crucial steps in the direct learning methodology. The model's Kardi & Nur can be delivered through classroom discussions, hands-on workshops, and demonstrations. Also, it's what teachers use to get their lessons across to their pupils. The syntax in this learning model is presented in 5 stages, as follows:

Table 1. The Syntax or Overall Pattern and Flow of Learning Activities

Phase	Teacher's Role
Phase 1 Delivering goals and preparing students	The teacher explains the learning objectives, background information, its important lessons, prepare students to study.
Phase 2 Demonstrate knowledge and skills	The teacher demonstrates skills with true, or present information step by step.
Phase 3 Guiding training	Master plan and the member i guidance initialtraining.
Phase 4 Check understanding and provide feedback	The teacher checks whether the students have succeeded do a good job, member bait behind.
Phase 5 Provide opportunities for training and application	The teacher prepares opportunities to do advanced training, with special attention on applying to more complex situations and everyday life.

Sources: (Sidik & Agus, 2018, p. 49)

Computer Applications HyperText Markup Language version 5 (HTML5)

The Latin word medium meaning "introduction" or "intermediate," and its plural form, "media," is used in contemporary English. There is also the view that the media can serve as a "teaching aid" or instructional tool. Literally everything that can transmit knowledge from one communicator (the instructor) to another (the students) and back again is considered media in the context of education and training. The use of media allows for the integration of a curriculum-based teaching strategy with modern forms of communication and information gathering. As a sort of technology, HTML5 apps can adapt instruction to the unique needs of students, including those with dyslexia. HyperText Markup Language" is the full name of HTML, as stated by Satria et al.,

2015. Since the early days of the internet, HTML has served as the standard guideline for creating web pages. In 2011, widespread use of HTML5, the fifth major edition of HTML, began. Markup language that organizes the information found on the World Wide Web" (Sergei, in Satria et al. 2015, p. 422) describes HTML5. In order to facilitate the development of increasingly sophisticated online applications, new versions of the HTML standard enhance existing elements from earlier versions while also adding more semantic elements and new functionality.

Computer Applications Based on Hyper Text t Markup Language Version 5 (HTML5)

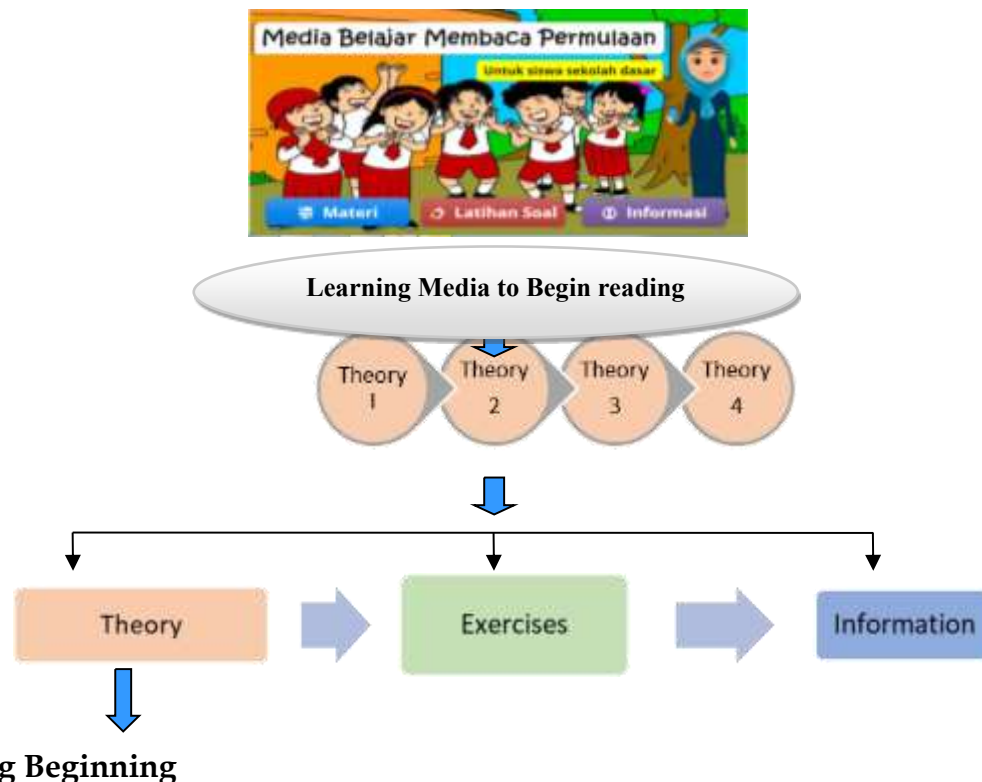


Figure 1. Computer Applications Based on Hyper Text t Markup

Reading involves many different cognitive and motor skills. Reading requires the use of your eyes and your ability to focus your vision. Understanding and remembering are examples of mental activities. Effective readers have sharp visual skills, fast eye movements, precise memory of language symbols, and sufficient reasoning ability to understand the material being read. The importance of reading skills for children's future success is recognized by many experts. The first eight years of a person's life play a key role in literacy development. Various factors such as teachers, students, learning environment, learning materials and teaching methods all contribute to students' reading ability. Children's reading achievement may be negatively impacted if these aspects, which are related to the reading instruction process, are ignored. The

errors that beginning readers make when encountering frequently occurring, two- or three-syllable words with no prefix or suffix, and controlled by syllable construction, will be based on data on early reading performance by children aged 7-9.

Dyslexia children

In 1968, the World Federation of Neurology issued the first definition of dyslexia as a learning difficulty in children who, despite having participated in traditional classroom learning processes, fail to master language skills like reading in accordance with their intellectual abilities. Dyslexia is a reading and writing impairment that often affects youngsters between the ages of 7 and 8. Dyslexia is the name for this condition in English. The Greek words *dys*, meaning difficulty, and *-lexis*, meaning letters or lexicon, combine to form the word dyslexia. Despite having a normal or above-average IQ, these people have a hard time learning to read fluently and understanding what they read. Challenges in these areas include phonological processing, vocabulary, and linguistics.

Meanwhile, the name and classification of learning disabilities were revised in DSM 5 (Diagnostic and Statistical Manual of Mental Disorders, 5th edition) in comparison to the previous DSM; specifically, learning disorder was renamed specific learning disorder, which encompasses reading difficulties. According to the DSM-5, dyslexia is another term for learning impairments characterized by issues with word identification and precision, poor decoding, and subpar spelling.

The foregoing knowledge leads us to the conclusion that neurological problems are linked to the ongoing academic process, including the limitations of dyslexia. Interact favorably for effective management of dyslexia skills. However, the measurement results will only be useful in developing appropriate educational programs for children with dyslexia if those needs are met.

Characteristics of Dyslexic Children

Reading habits, making the mistake of knowing the word, misunderstandings, and symptoms are the four categories of characteristics that identifies as being common among dyslexic youngsters. They tend to lose their place while reading, leading to either many repetitions or the skipping over of lines. They also frequently have him rest his head on the book or move it laterally to the left or right. Children with dyslexia generally have poor reading posture, with their books too far away from their eyes (the average child's reading distance is roughly 15 inches, or 27.5 centimeters). Children with dyslexia typically make mistakes in their word knowledge. Omissions, substitutions, reversals, misspellings, location shifts, vocabulary gaps, and jerking all fall under the category of errors. Errors in reading comprehension manifest themselves in a number of ways, including an inability to convey the sequence of stories read and an inability to grasp the central subject of a story. Reading word for word, reading with high tension and high notes, and reading with wrong emphasis are all signs of a disordered reading process.

CONCLUSION

As a result, it is essential that teachers encounter no difficulties in implementing the direct learning model via the html5 computer program, which is designed to help students with dyslexia improve their reading skills. In addition, teachers should be given the authority to effectively communicate appropriate lesson plans to students with dyslexia by utilizing media learning in an effort to reduce the dropout rate, the frequency with which students miss words or letters, and the negative effects of dyslexia when students return to class.

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