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E-Sistus: Electronic Information System for Students with Special Needs in Supporting Inclusive School Management

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ABSTRAK

Penyediaan data siswa berkebutuhan khusus masih bersifat manual, untuk memudahkan dalam mengakses data perlu dikembangkan sebuah sistem informasi secara digital dan fungsinya dapat lebih cepat diterapkan. Sejalan dengan kebutuhan tersebut, penelitian ini bertujuan untuk mengembangkan sistem e-informasi siswa berkebutuhan khusus dalam menunjang manajemen sekolah inklusi. Penelitian ini mengembangkan pengembangan E-Sistus yang sesuai dengan model pengembangan ADDIE. Penelitian ini menggunakan 4 (empat) teknik dalam pengumpulan data yaitu observasi, wawancara, angket atau kuesioner, dan tes. Penelitian ini menggunakan teknik analisis deskriptif kualitatif, analisis deskriptif kuantitatif, dan analisis statistik inferensial. Hasil penelitian ini menemukan tingkat kelayakan produk berdasarkan ahli isi mendapatkan persentase sebesar 90% berada pada kategori sangat baik. Tingkat kelayakan produk berdasarkan ahli desain instruksional memperoleh persentase sebesar 91,6% berada pada kategori sangat baik. Tingkat kelayakan produk berdasarkan ahli media diperoleh nilai rata-rata sebesar 97,5% berada pada kategori sangat baik. Tingkat kelayakan produk berdasarkan uji coba perorangan diperoleh hasil persentase sebesar 94,16% berada pada kualifikasi sangat baik. Tingkat kelayakan produk berdasarkan uji coba kelompok kecil diperoleh hasil persentase sebesar 93,33% berada pada kualifikasi sangat baik. Sistem Informasi Elektronik Siswa Berkebutuhan Khusus (E-Sistus) telah terbukti efektif secara signifikan dalam menunjang manajemen sekolah inklusi..

ABSTRACT

Providing data for students with special needs is still manual, to make it easier to access the data, a digital information system needs to be developed so that its functions can be implemented more quickly. In line with these needs, this research aims to develop an e-information system for students with special needs to support inclusive school management. This research develops E-Systus development in accordance with the ADDIE development model. This research uses 4 (four) techniques in data collection, namely observation, interviews, questionnaires, and tests. This research uses qualitative descriptive analysis techniques, quantitative descriptive analysis and inferential statistical analysis. The results of this research found that the product feasibility level based on content experts obtained a percentage of 90% in the very good category. The product feasibility level based on instructional design experts obtained a percentage of 91.6% in the very good category. The level of product suitability based on media experts obtained an average value of 97.5% in the very good category. The product feasibility level based on individual trials obtained a percentage result of 94.16% which is in very good qualifications. The product feasibility level based on small group trials obtained a percentage result of 93.33% which is in very good qualifications. The Electronic Information System for Students with Special Needs (E-Sistus) has been proven to be significantly effective in supporting inclusive school management.

1. INTRODUCTION

Advances in science and technology have provided great benefits for human life, including communication and education. The National Education System as stated in Law Number 20 of 2003 guarantees that every citizen has the same right to obtain quality education (Khunaifi & Matlani, 2019; Noor, 2018; Rahman et al., 2021).This law is proof of the guarantee that education must be fair and accessible to all levels of society. Inclusive education is an innovative program that aims to provide equal educational opportunities for all students, including people with disabilities, who have intellectual abilities and/or special talents (Kurniawan et al., 2022; Muazza et al., 2018; Nurfadhillah et al., 2021). The goal of implementing inclusive education is to offer comprehensive educational opportunities to students with physical, emotional, mental, and social disabilities, as well as those who have extraordinary intellectual abilities or special talents. This approach ensures that all students receive a high-quality education tailored to their individual needs and abilities, while promoting diversity and preventing discrimination (Hamonangan & Sudarma, 2017; Hermanto, 2010; Masfiah et al., 2021).

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Badung Regency has issued Decree Number 450 of 2016 concerning the appointment of schools providing inclusive education in its area. Inclusive education practices, especially in inclusive schools in Mengwi District, Badung Regency, have been running since 2017 and have succeeded in fostering a culture of selflessness. Elementary School No. 3 Sempidi has been designated by the Badung Regency Government as a school providing inclusive education in Mengwi District. Based on school statistical data, student enrollment at SD No. 3 Sempidi indicated that students with special needs at SD No. 3 Sempidi tend to continue to increase every school year. Implementation of a comprehensive program in elementary school No. 3 Sempidi uses a regular class system that uses a pull-out approach, namely the students with special needs are educated with their friends in regular/inclusive classes. However, at certain intervals, the student is temporarily removed from the regular/inclusive class and directed to the guidance/resource room. Here, they receive special instruction and guidance from psychologists and special accompanying teachers. Implementation of the inclusion program at SD No. 3 Sempidi involves individual and group mentoring activities. Each student is provided with personal support from a psychologist and receives additional help from a dedicated teacher while studying in class.

The data presented relates to students with special needs at SD No. 3 Sempidi as one of the schools that provides inclusive education starting from Identification, Assessment, Planning Matrix, Individual Learning Program (PPI), and Accommodative RPP that meets the needs of students with extraordinary needs (Fajra et al., 2020; Sari, 2012). All of this data is packaged into an all-encompassing educational program, with the aim of assisting educators in providing appropriate services to students with special needs. The process of collecting data on students with special needs is currently done manually. To make it easier to access the necessary data regarding students with special needs, it is necessary to develop an information system so that the data can be presented digitally and its functions can be implemented more quickly. Considering these constraints, an e-information system is urgently needed so that all forms of information related to students with special needs can be accessed by stakeholders more quickly, and undoubtedly, this facilitates the provision of services to students with special needs (Elbasuony et al., 2018; Wibowo & Veronica, 2022). Based on the explanation above, it is important to develop an e-information system for students with special needs at inclusive schools in Mengwi District, Badung Regency.

It is hoped that the development of e-information systems in the future will be more effective and efficient, so there is a need for appropriate models in developing these information systems. The ADDIE model is a versatile design framework that serves as a guiding principle in this research, specifically for building application program tools and infrastructure that are efficient, adaptable, and aligned with application goals. The ADDIE paradigm consists of five distinct stages: analysis, design (specifically application design), development or production (actualization of application design), implementation or delivery (application to a real-life environment), and evaluation (post-implementation assessment) (Branch, 2010; Spatioti et al., 2022). This model shows greater rationality in problem solving than other models due to its comprehensive coverage of all components requiring research and development, as well as the inclusion of an evaluation stage that provides feedback for ongoing research (Meliala et al., 2020; Tegeh et al., 2015).

The aim of this research is to develop a product in the form of an E-Information System for Students with Special Needs to Support Inclusive School Management in Mengwi District, Badung Regency through product feasibility testing by several experts so that it can be effectively used in supporting inclusive school management. Specifically, this research aims to determine the design of an e-information system for students with special needs in supporting the management of inclusive schools in Mengwi District, Badung Regency, determine the level of feasibility and examine the effectiveness of the e-information system for students with special needs in facilitating the management of inclusive schools in Mengwi District, Badung Regency. This can be evaluated by comparing the pre-test and post-test scores of users who use the E-Site.

2. METHOD

The development of an e-information system for students with special needs to support the implementation of inclusive educational institutions applies research and development methodology. Research and development (R&D) is a systematic approach used to investigate new products and then evaluate their efficacy (Sugiyono, 2011).This model built in a way programmed with cycle activity Which systematic Which aim For solve problem administration student need special related with processing And support every individual student need special in accordance with need And its characteristics. Wrong One superiority ADDIE model is more suitable as base development system information electronic for student need special For support management school inclusion in Subdistrict Mengwi Regency Badung.The ADDIE approach consists of five distinct stages: Analysis, Design, Development, Implementation, and Evaluation (Aldoobie, 2015). Pre-development or preliminary research starts from the preparation, survey and needs analysis stages. Before carrying out development, this research is based on pre-development or other terms from preliminary research. The things that must be done are preparing everything that will be done in this research, such as taking care of permits in the field,

preparing expert interview guidelines and guidelines for observing student behavior in research. At the survey stage, researchers conducted a comprehensive study to determine the school profile. Observe and record research subjects, identify problems and interview class teachers and special support teachers. With the help of needs analysis, the needs for e-information systems for students with special needs, etc., are identified. This research is based on the procedures used as a sequence of research steps that must be followed to complete or produce an e-information system product for students with special needs in the development of inclusive schools. The stages in developing an e-information system for students with special needs can be seen in Figure 1.

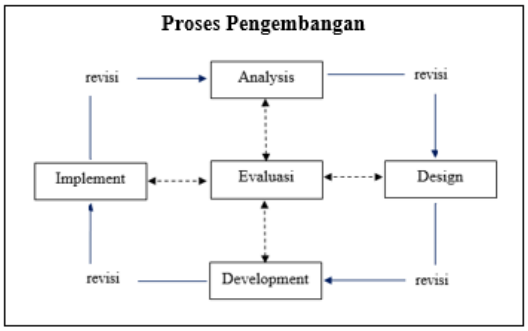

Figure 1. Procedures for E-information System Development for Students with Special Needs

This research project uses four data collection procedures, namely: (1) observation, (2) interviews, (3) questionnaires, and (4) tests. Product testing aimed at evaluating electronic information systems designed for children with special needs is carried out by two groups: (1) specialists and (2) test subjects. This review stage is carried out by a panel consisting of content experts, design experts and media experts. The individual testing phase includes collecting feedback from potential product users regarding the results of the ongoing development of an e-information system for children with special needs. At the individual trial stage, the trial participants consisted of 3 teachers who were recruited variously. During the pilot phase, the electronic information system for children with special needs was evaluated on a sample of 9 instructors randomly selected from inclusive schools to accurately represent the target demographic. The effectiveness testing stage is very important in development research because it determines whether the product created effectively supports inclusive school administration and can be implemented in real-world scenarios. Testing was carried out on a sample of 19 teachers who had various attributes such as IT proficiency level, educational background, gender, age, and IT learning progress. These attributes are selected based on the target demographic characteristics. This research uses many data analysis methodologies, including qualitative descriptive analysis, quantitative descriptive analysis, and inferential statistical analysis.

3. RESULT AND DISCUSSION

Result

This research project aims to create an electronic information system specifically designed for students with special needs and in accordance with the goals of inclusive education. This website was created to streamline the process for teachers in inclusive schools to obtain more efficient information about students with special needs in inclusive schools. This product offers great versatility as it can be accessed at any time. This website was created accompanied by visual documentation specifically designed for students with special needs at the school. The E-Information System for Students with Special Needs (E-Sistus) developed in this research project shows a high level of efficacy and efficiency, making it suitable for application in inclusive school management. To assess the feasibility of the E-Information System for Students with Special Needs (E-Systus), a series of product trials were carried out. The trial was carried out through a series of steps, which included (1) evaluation by content experts, (2) evaluation by instructional design experts, (3) evaluation by media experts, (4) individual testing, and (5) testing with small groups.

Design and Development of an E-Information System for Students with Special Needs

The initial stage carried out by developers is the needs analysis stage. Currently, it seems that data collection on students with special needs in inclusive schools is still done manually, this can be seen from the application of the needs analysis process. These difficulties arise because there is no electronic information system specifically designed to meet the information or data needs of children with special needs, thus hampering the operational effectiveness of inclusive schools in Mengwi District, Badung Regency. The next stage carried out is

the design/design stage. At this stage, the data collected from the analysis stage is converted into written documentation which will be used as a goal for further development. The design is carried out in accordance with the conclusions of the needs analysis that has been carried out previously. During this phase, the software, website, and tools and materials required for the construction of the electronic information system are also determined. The E-Site design display can be seen at Figure 2.

Figure 2. Cover Design for the E-Information System for Students with Special Needs (E-Systus)

The design begins with designing the user interface. Figure 2 This design is carried out by making a sketch of the web home page, this process is carried out using the figma application. The form of the user interface design is designed into 3 types of displays, namely displays that can be seen by admins, displays that can be seen by teachers, and displays that can be seen by parents or the public. The third stage corresponds to the development stage. At this stage the product undergoes development and preparation based on previously designed specifications. This is adjusted to the documents that have been prepared previously and have been agreed upon. The final product resulting from this development stage will be tested for feasibility. This is done through assessments carried out by validators and teachers who act as test subjects. The E-Site development stage, which is facilitated by the figma application, continues with coding and compiling information and data on students with special needs in inclusive schools. Figure 3 illustrates the development stages in the E-Site system.

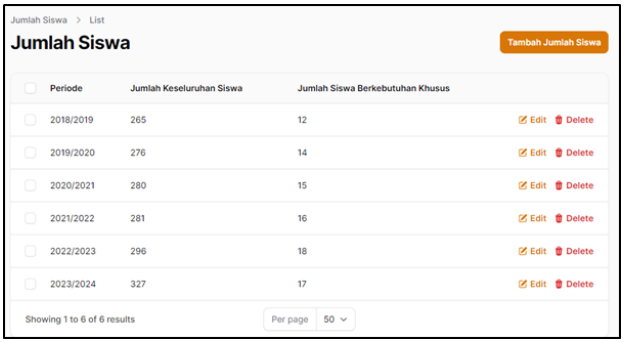

Figure 3. Display for Filling in the Database for Students with Special Needs in Admin

The implementation stage is the fourth stage. This step was taken to assess the teacher's response as a user in terms of the attractiveness and suitability of the media. During the previous phase, the media undergoes validation by specialists and product trials are carried out. The results of the resulting system have been tested by experts and teacher users, then implemented in activities aimed at collecting information about children with special needs. This is done to assess teacher responses and the efficacy of the resulting system. At this implementation stage, an initial assessment and final assessment are carried out to evaluate the efficacy of the E-Sistus. The evaluation stage is the final and fifth stage of the process. The current step involves assessing the data collected in previous stages, particularly the implementation stage. The evaluation carried out at this stage is in the form of formative and summative evaluation. Formative evaluation is carried out to measure or evaluate E-Sistus products which include expert validation, individual trials and small group trials. Summative evaluation is carried out to assess the effectiveness of the E-Site created for the effectiveness testing stage.

The design and development of this E-Sistus consists of several components and indicators, namely, 1) The ADDIE development model component consists of indicators: a) The ADDIE development model matches the character of the e-information system for students with special needs, b) The reasons for choosing the ADDIE development model are conveyed very clearly. clear and accurate. 2) The components of the stages of developing an e-information system for students with special needs consist of indicators: a) The stages of developing an e-

information system for students with special needs in accordance with the ADDIE development model, b) The stages of developing an e-information system for students with special needs are described in detail clear and accurate. 3) The components of clarity, practicality and consistency consist of indicators: a) The stages of developing an e-information system for students with special needs using the ADDIE development model are explained clearly and in detail, b) The process of developing an electronic information system for students with special needs is very practical and measurable, c) The steps for developing a student e-information system are carried out regularly and sequentially. 4) The evaluation consists of indicators: a) The evaluation design of the e-information system for students with special needs is in accordance with the ADDIE development model, b) The trial instrument developed is very clear, c) The trial subjects involved are very suitable.

Feasibility of an E-Information System for Students with Special Needs (E-Systus) Based on Content Experts

Once this E-Site product has been developed, it continues with the first stage of evaluation, namely a product review by experts. The results of this review were obtained through filling out a questionnaire instrument. Based on the results of a review by content experts, this E-Site product obtained a percentage of 90% which after conversion was in very good qualifications. Content experts examine the overall content presented, the accuracy of the content contained therein, the use of grammar, visualization and the completeness of the content on the E-Site. The results of the E-Sistus content expert test stated that the content presented is very appropriate to the characteristics of students with special needs, the content presented is correct, accurate, pays attention to the novelty (update) of the data, is presented appropriately based on existing facts, the grammar is appropriate to the user's cognitive level, writing the spelling of the content according to linguistic rules, the features displayed are in accordance with the purpose, the level of breadth of the content, and the information presented accurately and in detail. Apart from that, comments from experts show a positive response regarding the contents of the E-Site which has been developed with several notes for future improvements. There are several suggestions made for the progress of E-Sistus products. Based on the test results by content experts, it can be concluded that the E-Site that has been developed is suitable for use in inclusive school management.

Feasibility of an E-Information System for Students with Special Needs (E-Systus) Based on Instructional Design Experts

Instructional design experts examine the objective aspects, strategic aspects and appearance aspects of the E-Site. Instructional design expertBased on the results of expert instructional design tests, it was found that the purpose of the E-Site is presented clearly, the features presented are consistent with the purpose, the content presented is delivered systematically, can motivate users to obtain information, attract users' attention, and provide opportunities for users to obtain information in a systematic way. independent. The selection of backgrounds is appropriate to the characteristics of students with special needs, the color display in each feature presented, the images displayed are very clear, the size of the images displayed is appropriate to the conditions of students with special needs, the type and size of letters displayed, and the variety of letters displayed in each feature are good and appropriate to the conditions of students with special needs. The delivery of material presented in the E-Site provides an artificial dimension/environment created with computer hardware and software. The results of this review by instructional design experts were obtained through filling out a questionnaire instrument. Based on the results of a review by instructional design experts, this E-Sistus product obtained a percentage of 91.6% which after conversion was in very good qualifications and there were several suggestions made for the progress of this product. Based on the results of a review by instructional design experts, it can be concluded that the E-Site that has been developed is suitable for use in inclusive school management.

Feasibility of an E-Information System for Students with Special Needs (E-Systus) Based on Media Experts

The stage after the review by an instructional design expert is a review by a media expert. Media Experts carry out checks on technical aspects, appearance, programming, layout and completeness aspects of the E-Site. Media expert reviews in technical aspects ensure that the E-Information System for Students with Special Needs (E-Sistus) is easy to use, can help users to obtain information about students with special needs, and program management is presented in a quality manner. Based on the results of media expert tests, it is stated that the E-Sistus complies with technical elements, the suitability of the appearance, programming, layout and completeness of the e-information system is correct and attractive. The results of the evaluation of E-Site development products by media experts were obtained by filling in a questionnaire instrument. Based on a review conducted by media experts, the E-Sistus product received a rating of 97.5% with a very good rating, which means it does not require further revision. These results indicate that the E-Sistus product being developed is suitable for use without the need for revision. The presence of media experts to validate the E-Sistus as a development product that is suitable for use in supporting inclusive school management.

Teacher Responses at the Individual Trial Stage

After evaluation carried out by experts, trials are carried out at the individual trial stage to assess the practicality of the product being developed. The materials provided on the E-Site have been subjected to rigorous testing by specialists and then improved based on their ideas. This is then evaluated by teachers with different levels of IT proficiency, including teachers with low, medium and high mastery. The purpose of carrying out individual trials is to ensure the usability of the product being made. The results achieved in each trial demonstrate outstanding qualifications. The teacher's comments confirm that the products displayed on the E-Site are suitable for integration into inclusive educational institutions. Teacher users stated that the use of E-Sites is very suitable for the current era. The use of e-Sites is very suitable and useful in presenting digital data, considering the attributes of today's students who are classified as digital natives. Based on these findings, the use of E-Sites in the education sector, especially in inclusive schools, is very suitable for forming digital databases. There are three elementary school teachers, namely No. 3 Sempidi who were test participants for this research. The test subjects consisted of a teacher with limited IT proficiency, a teacher with moderate IT proficiency, and a student with advanced IT proficiency. The tool used to collect data from this particular experiment was an individual pilot questionnaire. The results of the individual trial evaluation show that 94.16% of the trial subjects have achieved very high qualifications, according to the scale conversion table 5. Based on the data provided, it can be concluded that the E-Systus development solution is appropriate to facilitate inclusive school management.

Teacher Responses at the Small Group Trial Stage

The final stage of this product trial is a trial conducted with a limited number of participants. Participants in this small-scale experiment were elementary school teachers from Sempidi No. 3. This group consists of nineeducators, with three people having low IT skills, three people having medium IT skills, and three people having high IT skills. The data collection tool used in this research was a questionnaire specifically designed for small group trials. The results of the small group experimental evaluation showed that 93.33% of the test subjects had very good qualifications. Based on existing data, it can be concluded that the ongoing development of the E-Site is in accordance with its intended purpose. The E-Information System for Students with Special Needs (E-Sistus) which has been tested by experts and tested by teachers is then revised and then continues to the implementation stage. At the implementation stage, the E-Sistus was implemented by class teachers and special assistant teachers at SD No. 3 Sempidi as an inclusive school. The results of teacher responses in small groups were found to be in the very good category. Student comments stated that the E-Site was very good. Based on the response questionnaire for using the E-Sistus, it was found that using the E-Sistus was able to increase enthusiasm and enthusiasm. By using various media such as pictures, professional information (psychologists), teachers can be actively involved. Apart from that, it was found that through the implementation of the E-Information System for Students with Special Needs (E-Sistus) it was able to increase the self-confidence of teachers in inclusive schools. This shows that the use of E-Sites is very effective in increasing database provision. In line with these results, research also shows that the use of E-Sites in activities can increase work effectiveness in inclusive schools.

Effectiveness of E-Information System Development for Students with Special Needs (E-Systus)

E-Site test is carried out,then the pre-test and post-test scores are collected. The t-test was carried out using SPSS, which shows a significance value in the Sig column (2-tailed) of 0.000, which indicates that this value is smaller than the threshold of 0.05 ($p > 0.05$). The data shows that the average pre-test score is 57.29, while the average post-test score is 87.67. Calculation of the N Gain value produces a score of 0.711 which indicates the high category. The results of the t test and N Gain analysis show that the use of information technology for children with special needs is effective in facilitating the management of inclusive schools in Mengwi District, Badung Regency. As a result, there is a disparity between the average value of test results before and after implementing the E-Sistus. Simply put, there is a real difference in the average test results between educators who have used the E-Site compared to those who have not used the E-Sistus. The proof can be seen through analysis of teacher assessment results at SD No. 3 Sempidi, where the average score obtained by teacher users on the post-test was 87.67 which shows a commendable level of achievement. Considering that the average post-test score is higher than the average pre-test score, it can be concluded that the E-Information System for Students with Special Needs (E-Sistus) is suitable for facilitating inclusive school administration.

Discussion

This research involves research and creation of designs and products for e-information systems for students with special needs called E-Sistus. E-Sistus is an e-information system specifically designed to display information and data for students with special needs. Various displays exist on the E-Site such as application usage guide, log in, home, school vision and mission, student data, schedule, info, activity documentation, discussion area, professional contact, and log out (Batubara, 2017; Triandika et al., 2021).The various displays presented aim

to make it easier to input and obtain information related to students with special needs in inclusive schools so that they receive services that suit their respective specificities.

E-information systems certainly have weaknesses. The weaknesses of the e-information system for students with special needs (E-Sistus) can be overcome by various efforts, namely: (1) Minimizing the misuse of technology by providing training to teachers, in this case as the main users of the e-information system for students with special needs and installing security of the e-information system for students with special needs. (2) Minimize the repetition of errors by placing a special operator as admin so that errors can be detected properly. (3) Illogical processing is overcome by presenting experts as validators of the e-information system for students with special needs. (4) Minimize the inability to translate user needs into technical requirements by displaying a contact menu and discussion area on the e-information system for students with special needs (Muhdi & Nurkholis, 2021; Rahmawati & Soekarta, 2021).

The aim of this E-Sistus is to streamline the process for educators in inclusive schools so they can access information more efficiently regarding students with special needs in inclusive schools. This product offers great versatility as it can be accessed at any time. This website was created accompanied by visual documentation specifically designed for students with special needs at the school (Ghaffur, 2017; Mery et al., 2022). The E-Information System for Students with Special Needs (E-Sistus) developed in this research project shows an extraordinary level of efficacy and efficiency, making it very suitable for application in inclusive school management (Affandi, 2017; Kurniawan et al., 2022). To assess the feasibility of the E-Information System for Students with Special Needs (E-Systus), a series of product trials were carried out. The trial was carried out through a series of steps, which included (1) evaluation by content experts, (2) evaluation by instructional design experts, (3) evaluation by media experts, (4) individual testing, and (5) testing with small groups.

Based on the content expert's assessment, the level of achievement is included in the very good category. In accordance with previous research, Special Needs Students E-Information Systems (E-Sites) must undergo testing by instructional design professionals to ensure their final development (Rochman JK, 2021). The tool used in this trial, including by instructional design experts, was a questionnaire. In consultation with instructional design specialists, product assessments, comments, and suggestions are collected to serve as a basis for improving the product (Dayanti et al., 2021; Wahyuni et al., 2021).Based on evaluations carried out by instructional design experts, the level of achievement shows very good qualifications. Apart from completing the content expert and instructional design expert tests, in the final creation of the E-Information System for Students with Special Needs, it is also necessary to carry out a media expert test. Based on evaluations carried out by media professionals, it shows a very high level of feasibility.

The e-information system that serves students with special needs has undergone development and revision based on evaluation and input from experts. Next, trials are carried out on individual users or teachers to assess the efficacy of the e-information system that has been built. Participants involved in the individual trial consisted of three educators from SD No. 3 Sempidi. The previously generated questionnaire tool was used to conduct individual experiments (Pratiwi & Margunayasa, 2022; Simamora et al., 2019). The results show a very strong level of qualifications. After analyzing feedback and recommendations from individual trials, it was evident that no revisions were needed for the information system designed for children with special needs. Therefore, the system can proceed to the next testing step, which involves conducting small batch trials (Latifah & Utami, 2019; Simamora et al., 2019). Participants involved in this small-scale experimental study consisted of a total of 9 educators. The pilot study was conducted using a pre-existing questionnaire instrument. The results of the small group trial evaluation involving 9 teachers showed that 8 teachers gave very commendable responses, while 1 teacher gave a satisfactory response. Based on assessments carried out on a small sample, the average percentage is considered very good qualifications.

Evaluation of effectiveness was carried out through a series of field trials carried out in several stages. The first step involves administering an initial assessment known as a pretest. Furthermore, implementing an information system designed for children with special needs to a total of 19 teachers at SD No. 3 Sempidi. Furthermore, the posttest functions as a final assessment carried out after implementing an e-information system designed for students with special needs. The results of the field test evaluation of 19 teachers showed that 17 participants gave very commendable responses, while 2 participants gave satisfactory responses (Saifulloh & Darwis, 2020; Wulan et al., 2019). The results of the t-test and N Gain analysis show that the use of the e-information system for students with special needs is effective in supporting inclusive school management in Mengwi District, Badung Regency.

The use of e-information systems can increase the accessibility of information for students with special needs, enabling school management and related stakeholders to make better decisions. Apart from that, e-information systems can facilitate better collaboration and communication between teachers, parents and other related parties. However, this research has limitations, the research is limited to one or a few inclusive schools, so generalizing the findings to various inclusive school contexts can be difficult. In addition, the short duration of the research results in a lack of knowledge of the long-term impact of e-information systems on the development and

well-being of students with special needs, which can limit a comprehensive understanding of the benefits of these systems.

4. CONCLUSION

Research findings show that the design and development of the E-Site are in line with the ADDIE development model. The assessment of product suitability assessed by content experts is determined by the validity of the results obtained from the development of the E-Information System for Students with Special Needs (E-Sistus). This development process involved the use of a questionnaire method, which was reviewed by content experts and resulted in an excellent rating in the "very good" category. The feasibility of the E-Information System for Students with Special Needs (E-Sistus) product was assessed by instructional design experts. Validation of development results was carried out using a questionnaire method and resulted in a "very good" category. Product compatibility, as determined by media experts, reaches the "very good" category. The product suitability level, as determined by individual experiments, achieved results indicating excellent credentials. The level of product suitability determined through small group testing achieves percentage results indicating excellent credentials. The E-Information System for Students with Special Needs (E-Sistus) has proven to be significantly effective in supporting inclusive school management in Mengwi District, Badung Regency.

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