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An Evaluation of Clinical Education Program by Digital Media Utilization at the Faculty of Medicine, Indonesian Christian University (FK UKI)

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Abstract

Background/purpose. This study aims to know the effectiveness of clinical education programs in the Faculty of Medicine, Indonesian Christian University (FK UKI), in terms of Context, Input, Process, Product, and the constraints that occur during the implementation of the program to improve and enhance the quality of the program, so that learning objectives can be achieved optimally.

Materials/methods. The study is conducted at the Faculty of Medicine, Universitas Kristen Indonesia (FK UKI), using the CIPP model (Context, Input, Process, Product). The results for the context variables, input variables, process variables, and product variables are effectively organized.

Results. Generally, based on the CIPP model analysis, the implementation of the clinical education programs at the Faculty of Medicine, Indonesian Christian University (FK UKI) is effective in improving students' achievement in these programs.

Conclusion. The use of digital media distribution in clinical education, based on the CIPP evaluation model, is effective in supporting students' successful completion of the program during the learning process. The only obstacles in the learning process are not all the diseases or cases listed in the logbook that students encountered during clinical education.

1. Introduction

Medicine is a science and art that studies diseases and how to cure them. Medicine is a branch of health science that studies how to maintain human health and restore humans to a healthy state by providing treatment for diseases and injuries. This science upholds the rights and obligations of patients and facilitates further action/handling plans. Deductive reasoning and applied technology form the foundation for solutions to many clinical problems (Harrison, 2013).

Physical, psychological, and environmental factors are interrelated and interact dynamically and continuously, which, in normal and healthy conditions, are in balance (Airasian, 2021; Nathan, 1981; Yamada, 2005). Treatment carried out on patients and living body tissues and abnormal mechanisms (illness) is expected to find the cause, course of the disease, how to fix and treat it scientifically through research and clinical trials so that the best way is found according to science and technology that continues to develop (MeschanIsadore, 1984; Salim, 2011).

Medical practices and models are the essential concepts and principal methodologies for analyzing and addressing medical challenges that have evolved through the course of human medical exploration and practice. They represent a sophisticated abstraction of a comprehensive understanding of life, health, and illness, serving as the foundational principles and initial frameworks that individuals follow when investigating medical issues. Medical models evolve in tandem with societal advancement. These modifications correspond with human philosophical thought, societal shifts, scientific and technological progress, and novel insights into the world, life, and sickness. Throughout the primal epoch of human history, the oldest theistic medical model was succeeded by natural philosophy, mechanistic, and biological models (Zhang, 2024).

The role of a doctor requires expertise and carries a high risk to living things; therefore, a medical education system was developed for those who want to become doctors. In medical education, the process is to guide prospective medical students through stages of study, from basic to advanced. The guidance process is carried out through theory, practice, and research, so that prospective medical students can diagnose, prevent, and treat patients in accordance with science and technology that continue to develop (Candoli, 1995; Paul, 2002; Peter, 2011).

The 2004 Law on Medical Practice Standards states that the general standards for professional education for doctors and dentists are in accordance with laws and regulations governing the national education system. The national education system comprises all components of education that are interrelated to achieve national education goals in accordance with the decision of the Indonesian Medical Council, the Indonesian Medical College, the Medical and Dental College, the Association of Medical and Dental Education Institutions, and the Association of Teaching Hospitals. Thus, if each component of medical education has the same standard, then the doctors produced will be guaranteed to have the same quality (Glassman & David, 1995).

Medical education is an academic and professional field that requires not only a strong biomedical science foundation for students but also direct patient care. Therefore, in the process of medical education, both in conventional and integrated learning systems, clinical education plays a very important role (Kahan, 2008) and enables students to develop their expertise. The program can last for a relatively long period of time (Guba et al., 1983).

Clinical education plays a crucial role in developing student competence. Clinical education also plays a very important role in developing students' abilities to solve real clinical problems and make the right decisions (Saunders, 1971). It can be studied in the laboratory, through simulations, and in the actual clinical environment, directly on patients. Both of these methods have their own weaknesses and advantages; however, learning in real cases in hospitals provides very meaningful learning value for students who in certain aspects, cannot be replaced by simulation learning, so this

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period is a very vital stage in medical education (Marynowski, 2006) through bedside teaching provides direct clinical experience to patients during the learning process. Students can directly contact patients and deal with real clinical cases; with this learning method, students will encounter clinical signs and symptoms in patients that they cannot find in simulation or laboratory techniques (Rao, 2007). It can also increase students' motivation to study patient cases and gain clinical experience. At the same time, students also see their clinical supervisors manage patients, so this experience will serve as a professional example.

The ultimate goal of learning in a real clinical environment is to form professional medical competencies. They include the ability and skills to carry out various aspects, ranging from good communication and question-and-answer skills to conducting physical examinations, establishing diagnoses, planning and carrying out management, further planning for cases handled if needed, and taking various actions in managing cases handled (Schwartz, 1999).

The clinical learning experience in hospitals also builds students' abilities to make clinical decisions and solve problems in the cases they encounter. This ability is better known as clinical reasoning. This ability is not only knowledge of general case management, but also knowledge and skills in asking and answering questions for patients, and in managing patients specifically according to their clinical conditions (Linda & Paul, 2005).

The benefits of medical education derived from clinical learning in hospitals are clear, but during implementation, there are challenges and obstacles arising from the community and patients, as well as from the education implementation system (Schwartz, 1999).

The increasingly advanced development of information in society is a challenge for clinical education. On the one hand, society is increasingly sensitive to the health services provided, leading to many demands for service satisfaction, quality improvement, and the knowledge and skills of the health workers who serve them. On the other hand, medical education in health service centers is highly needed to train prospective doctors, as only then can doctors with clinical skills and competencies be formed (Davis, 2011).

The learning process in hospitals and the support for services are challenging for students. Students feel physically and psychologically heavier when compared to pre-clinical education. The heavy burden these students feel is not only due to a new learning environment and atmosphere, but also to psychological adaptation to real clinical cases and to clinicians in hospitals who have a service burden (Carlson, 2004; Hardywinoto, 1999; Hison, 2007).

The hospital, as a place of clinical learning, primarily serves as a health care center. The hospital faces an additional burden as a place of education, which, of course, imposes its own burden on management and service systems. So, how the hospital environment is arranged as a place of education greatly determines the expected clinical education results (Maslim, 2001).

This arrangement not only affects the burden and experience students will have but also the time and quality clinicians allocate to providing guidance. Therefore, placing students in advanced hospitals with renowned experts or clinicians and sophisticated equipment does not necessarily ensure good results for the clinical education process (MeschanIsadore, 1984).

The implementation of adequate clinical education, supported by facilities and infrastructure, must be well organized, supported by other hospital service staff, and ensure the quantity and quality of guidance (Michael, 1991; Patel, 2007).

The education process in hospitals must provide students with sufficient experience. Sufficient learning processes and experiences can build these students' competence, because success in the final exam cannot reflect whether a student already has sufficient clinical experience. The Faculty of Medicine of the Indonesian Christian University (FK UKI) is the first private Faculty of Medicine in

Indonesia, and UKI is a medical education institution that has its own practice hospital and has implemented clinical education programs since 1962. However, based on interviews with faculty and hospital leaders, and several senior doctors at the UKI hospital, clinical education at FK UKI was never evaluated, either from within or outside the campus, from 2006 to 2014. This is very unfortunate, considering the high demands on the expertise and professionalism of prospective doctors and other professionals from graduates of the FK UKI Clinical Education Program, which affects the fulfillment of all prerequisites for the Clinical Education Program. Likewise, the implementation of the Clinical Education Program must comply with the established standards. As previously mentioned, the general standards for professional education for doctors and dentists must comply with applicable laws and regulations. In this case, the implementation of the Clinical Education Program at the UKI Medical Faculty must be in accordance with the standards applicable in the national education system, in accordance with the standards in the decisions of the Indonesian Medical Council, in accordance with the standards of the association of medical and dental education institutions, and also meet the standards set by the association of teaching hospitals (Purwanto, 2009; Rusyadi, 2012).

The implementation of clinical education at FK UKI can be considered a program, as it is an activity designed to facilitate learning in clinical education at FK UKI. Evaluation of the program is the first step in supervision, namely, collecting the right data so that it can be continued with the provision of appropriate guidance. The benefit of program evaluation is to provide decision-makers with input to determine the follow-up of the program being implemented or that has been implemented. The most important thing that needs to be emphasized in determining the program is (1) Realization or implementation of a policy, (2) Occurs in a relatively long time, because it is a continuous activity, (3) Occurs in an organization involving a group of people.

As for the policies that can be carried out based on the results of the evaluation of a program, the decisions taken include stopping the program, because it is considered that the program has no benefits or cannot be implemented as expected, Revising the program, because there are parts that are not in accordance with expectations. Continuing the program, because the implementation of the program shows that everything is running as expected. Disseminating the program: because it has been successful, it is very good if it is implemented again in another place and time. In program evaluation, there are various models; the model used in this study is the CIPP model. The CIPP model evaluation comprises four components: Context, Input, Process, and Product. Evaluation of these components provides information for decision-makers and for program accountability. The CIPP model is also a reaction to Tyler's approach, which is concentrated on the final results of the learning program, while the CIPP model considers all evaluation components that affect program implementation. By focusing on Context, Input, Process, Product, and the challenges encountered during program implementation as the low practice on clinical education, this study aims to evaluate the efficacy of clinical education programs at the Faculty of Medicine, Indonesian Christian University (FK UKI), since it is trully essential to enhance program quality and optimize the achievement of learning objectives for the short, middle and long term reviews in medical field evaluation.

2. Literature Review

2.1. Program Evaluation

Logic models are essential for evaluating nonprofit organization programs, as they guide service assessment processes and identify and address service deficiencies to enhance organizational practices. Logic models visually depict programs, enhancing comprehension and assessment of services by providing clarity, illustrating event sequencing, and identifying program outcomes (Baucham et al., 2024). Newberry and Strong (2009) found that an effective collaborative logic model in the mental health sector was grounded in the experiences, needs, and expectations of service consumers. Trankle and Reath (2019) conducted a survey of service users and other stakeholders to assess a new national mental health recovery effort and included this feedback into their logic model. Their logic model accurately represented their program and established a foundation for subsequent reviews. A logic model must specify enhancements and provide guidance without imposing restrictions on the trajectory of case-level and program-level actions (Unrau, 1993).

2.2. Learning Media

Technology is being integrated into a variety of fields as it becomes increasingly prevalent in daily life. Technology is widely used in education. The utilization of technology in education and its beneficial and detrimental effects are the subject of Bhosale et al. (2020). Enhanced engagement in lectures or sessions is one of the significant benefits of technology utilization, as it incorporates visual aids that more effectively capture students' attention than previously. Nevertheless, the term "e-learning" is not new. In the past decade, a significant quantity of effort has been devoted to the development of web-based E-learning technologies (Tîrziu & Vrabie, 2015; Mohmoud et al., 2013; Hussain, 2018). The trajectory of the learning system has been redirected, and recent technological advancements have improved its capabilities. Naikoo et al. (2018) contend that learners are afforded a broader selection of educational resources, including books, audio and video lectures, and references, as a result of advancements in contemporary technology. In the current era, Raja and Nagasubramani (2018) argue that societies must implement technology and provide institutions with state-of-the-art resources. Additionally, they recommend that educators and pupils collaborate with technology to improve educational systems. By introducing a tool capable of extracting primary topics from textual learning materials, linking related resources, and generating interactive, dynamic knowledge graphs, Badawy et al. (2022) advocate for interactive learning and support students in the learning process. To facilitate students' demonstration of their abilities and knowledge to prospective employers, El Koshiry et al. (2023) implemented blockchain technology to create a more accessible and reliable educational system.

2.3. Clinical Education

Establishing standardized programs is crucial for clinical practice and optimizing patient outcomes. Variability in medical practice in the United States leads to increased costs without a commensurate enhancement in patient outcomes. Clinical practice guidelines, designed to minimize variability and enhance treatment, possess various limitations that hinder physician compliance. Conversely, standardized clinical assessments and treatment plans provide a physician-crafted framework for enhancing care uniformity that acknowledges individual patient variations, honors physicians' clinical acumen, and adapts to the swiftly evolving medical knowledge. The orthopaedic community can combine expertise and experience to enhance instructional content and advocate best practices through global collaboration. Additionally, it is an opportunity to investigate shared challenges and novel solutions, aiming to achieve a more thorough understanding of sports injuries and their management (Farias et al., 2013; Migliorini et al., 2023; Migliorini et al., 2025; Lucenti et al., 2024).

3. Methodology

3.1. Research Goals

The purpose of this study is (1) to find out comprehensive information about the clinical education program at FK UKI and (2) to determine the success of the program based on the criteria and indicators determined in each aspect of the evaluation. In general, the components to be studied under the CIPP evaluation model include the context, input, process, and product of the clinical education program at FK UKI.

This study supports the logical flow that an evaluation includes descriptive and review/assessment aspects. Obtaining complete information about the clinical education program, as the first objective of this study, is descriptive in nature. By obtaining comprehensive information, it will provide stakeholders with an understanding of an aspect of the implementation of clinical education not only in the implementation activities but starting from the objectives of clinical education to the results of clinical education at the end of the program, even to the users of the results of clinical education (Davidson, 2005; Khamim, 2008; Soekidjo, 2005; Sugiyono, 2009).

The second objective is to determine the level of success of the clinical education program in a review, using criteria and indicators for the aspects of the program that have been determined. The criteria and indicators are arranged to support the achievement of the first and second objectives of this study.

The results of this study will inform decisions on follow-up actions for the clinical education program at FK UKI.

3.2. Research Approach, Method, and Design

Evaluation research of a clinical program in FK UKI using the evaluation method with a descriptive qualitative approach. In this descriptive qualitative approach, the selected evaluation model is the CIPP model by Stufflebeam. The context component of this research will examine the needs, problems, and opportunities to help policymakers define goals, priorities, and outcomes, including the rationale for implementing the program and the needs of user agencies for the implementation of the clerkship education program (clinic) in FK UKI. The rationale for implementing the program is the result of a basic analysis of the policy for implementing the clerkship education program (clinic) in FK UKI. This relates to the opportunity to evaluate the implementation of the clerkship education program (clinic) in FK UKI, to determine whether it should continue to be implemented (Arikunto, 2010; Arikunto et al., 2013).

The input component of this research will examine alternative approaches and efficient activity plans to meet the target needs and goals. The input components include institutional foundations, curriculum, students, educators, learning packages, education personnel, educational facilities, and budget (Stufflebeam & Anthony, 1986; Stufflebeam et al., 2007).

In this evaluation, intensive data mining will be conducted and carefully analyzed at each stage. The CIPP (Context, Input, Process, Product) evaluation model was selected for its comprehensive, methodical framework for assessing educational programs. This approach emphasizes both the results and the planning, execution, and decision-making processes that affect those results. The CIPP model integrates these four components, enabling evaluators to make formative decisions for continuous improvement and summative assessments for overall effectiveness. This corresponds with the objective of clinical education evaluation, which seeks to guarantee that program planning, resources, and implementation adhere to institutional and professional norms. The stages of the FK UKI clinical education evaluation research refer to the CIPP model flow developed by Daniel L. Stufflebeam, namely context, input, process, and product. These four stages serve as the main references for carrying out the evaluation. The design of the research model can be seen as follows:

Table 1. Research model design

Stages	Activities	Goals	Results
CONTEXT	Evaluation of the relevance of clinical education program policies to the implementation of	Analyzing program objectives	Conclusion
	Student Supervising Doctor, Clinical Education Facilities, and Infrastructure		Recommendation

Stages	Activities	Goals	Results
INPUT	Clinical Education Resources	Adequacy of clinical education program resources	
	Clinical Education Program and Administration		
PROCESS	Implementation of Clinical Education	Analyze the suitability of implementation with the program plan	
	Evaluation of Clinical Education Supervision and Monitoring		
PRODUCT	1. Graduations 2. Continuous updates	Analyzing program results	

The design of clinical education evaluation research at FK-UKI through stages (context, input, process, and product), activities (Recording Objective Conditions), objectives (Analyzing standard conditions with Objective Conditions), results, conclusions, and recommendations

3.3. Instrument Development, Validity, and Reliability

Research instruments are tools used to systematically and objectively measure or obtain information about the characteristics of variables inherent to the observation unit or research subject. In qualitative research, the quality of the research instrument concerns the validity and reliability of the instrument, and the quality of data collection concerns the accuracy of the methods used to collect data. In this study, data were collected using questionnaires and interview guidelines. In preparing and developing the instruments in this research for the survey items, the preparation criteria, and the adaptation are based on these aspects as the basic guidance covering;

1. **Contextual evaluation:**
   Government regulations, Faculty of Medicine - Universitas Kristen Indonesia (FK-UKI) policies, Vision, Mission, and objectives, academic autonomy, and comprehension of the execution of clinical education program policies at the university (Faculty) level.
2. **Input evaluation:**
   Students, clinical education supervisors, facilities and infrastructure, curriculum, academic personnel, program execution, and administration of clinical education.
3. **Process evaluation:**
   Clinical education planning, clinical education execution, clinical education assessment, supervision, and monitoring.
4. **Product evaluation:**
   Alumni, ongoing updates.

The instrument was validated by experts and practitioners directly affiliated with the UKI Faculty of Medicine to ensure the instrument used could obtain the desired data (valid data). The validity of the questionnaire used in this research instrument is construct validity, also known as construct validity. Validity is assessed from each aspect that will be expressed; its definition is first determined as a measure of whether this material is truly covered by it. Therefore, if the data collection tool is considered to have accommodated all the symptoms included in a given definition, it is quite valid (Guskey, 2000; MacKie, 1989; Patel, 2007).

In this study, the instrument, in the form of a questionnaire, was administered to 20 respondents. The trial respondents were selected based on the characteristics of the study respondents.

Meanwhile, the interview uses a semi-structured method, namely the use of only basic questions as a guideline. The semi-structured interview is a qualitative data-gathering method in which the researcher poses a sequence of prepared yet open-ended questions to informants. The researcher exercises greater control over interview topics than in unstructured interviews; however, unlike structured interviews or surveys that employ closed questions, there is no predetermined set of responses for each question.

Regarding the reliability of these instruments, it denotes the degree to which the instruments reliably assess their intended constructs over time, between participants, and among researchers, using internal consistency to demonstrate logical coherence among questions and ensuring that interview inquiries pertain to the same construct or theme (Creswell & Poth, 2018). It encompasses the existence of governmental policy papers about Clinical Education (evaluation context), entry requirements for Clinical Education (input context), the availability of design standards, the formulation of clinical education syllabi, and the creation of learning plans (process context) and graduates are physicians who fulfill the competency criteria sanctioned by the Indonesian Medical Council, as stipulated in Article 8 of Law No. 29 of 2004 about Medical Practice, namely the Doctor Competency criteria (product evaluation).

3.4. Participants

This study involved administering a questionnaire to 20 respondents, by demographic condition and situation, who are registered in the clinical education higher education program at the faculty of medicine UKI. All genders, geographic areas, and marital statuses are accepted, and respondents must have graduated from the bachelor's program in medical studies. The trial participants were chosen based on the characteristics outlined in the study, specifically the criteria for admission to clinical education (administrative completeness) as per the program's requirements and regulations, which are grounded in the Draft Standards for Facilities and Infrastructure for Postgraduate and Professional Higher Education Programs, BSNP, 2011. The Clinical Education selection stage can accommodate a maximum of 5 students for a 4-week minor program and 10 individuals for a 10-week major program. The room's dimensions align with the normal student capacity, accommodating learning materials such as computers, clinical guidebooks, internet access, and clinical practice rooms, as per established student capacity standards. Research activities were conducted at the Faculty of Medicine, Christian University of Indonesia. This research was conducted in accordance with the plan for students commencing clinical learning for the academic year 2023-2024. This study received approval from all participants, who consented to the release of anonymised data and illustrative excerpts. All procedures adhered to the Declaration of Helsinki. Informed consent was secured from all subjects before data collection commenced.

3.5. Data Collection Techniques and Procedures

Data Collection process, as part of its techniques and procedures in this study, was carried out in this chronological order:

1. Firstly, it is doing an interview, namely data collection with instruments in the form of a number of questions asked verbally by the interviewer to respondents, and the questions were answered verbally as well.
2. Secondly, document studies by doing, namely, data collection, where there are supporting documents for program implementation, and
3. Thirdly, there is a distribution of questionnaires containing a list of questions that can be answered in writing by respondents,
4. Last, it is conducted observation, namely, as data collection by observing all processes, people, and objects that influence program implementation.

The Data Collection Techniques and Procedures above were obtained from various data sources utilized in this study, which can be grouped into four groups of data sources, namely:

1. Informants or sources, namely, all students of the UKI Faculty of Medicine.
2. Events or activities, namely in the form of learning activity processes carried out on students.
3. Place or location, namely in the form of a description of the place where learning is carried out. In addition, the place as a data source will yield data describing the physical quality/class environment.
4. Archives and documents, which include the profile of the problem-based learning program at the Faculty of Medicine, Christian University of Indonesia.
5. Key informants (Dean, PD I, Manager of Professional Studies, Director of Core Informants, Head of Section

3.6. Data Techniques Analysis

The data analysis technique in this study primarily uses qualitative methods, beginning with field data collection through interviews, questionnaire distribution, document analysis, and observations. Then, grouping the data according to the components/aspects studied, and entering the data into an analysis format (data tabulation), and providing data codes according to suitable or unsuitable categories, and presenting the data qualitatively to be analyzed according to the CIPP evaluation model, and conclusions are given based on the established criteria. The analysis also uses the Content Validity Ratio or Lawshe's content validity ratio (CVR) (Wilde & Suzanne, 1995; Wirawan, 2011).

In the analysis of data obtained from the distribution of questionnaires, it will be done by looking at the mode (data that often appears) to determine the majority of answers from respondents, but considering that the data used is qualitative, answers that are not the majority are also considered (Sujana, 2009; Supardi, 2005). Quantitative data is analyzed using simple statistical methods, namely the average, to examine data trends. In the data analysis process, quantitatively, it pertains to a systematic methodology employed to organize, interpret, and extract meaning from non-numerical data, including interview transcripts, observational notes, or open-ended survey responses, encompassing: 1. Data Preparation and Familiarization, 2. Coding, 3. Categorization and Theme Development, 4. Data Interpretation, 5. Ensuring Trustworthiness. The objective is to reveal patterns, themes, and concepts that elucidate social phenomena comprehensively (Creswell & Poth, 2018; Braun & Clarke, 2019).

This study specifically addresses two categories of documents in its review process: rules governing the fundamental requirements for clinical education, which serve as the primary reference and selection criteria. Students (Criteria for Admission to Clinical Education, Quantity of Clinical Education Students). The details of the document review process are presented below;

1. Clinical Education Supervising Physician (Possesses a decree from the Director as a Clinical Supervisor).
2. Facilities and Infrastructure (Provision of facilities and infrastructure in compliance with the Draft Standards for Facilities and Infrastructure for Postgraduate and Professional Higher Education Programs, BSNP, 2011).
3. Curriculum (Accessibility of Curriculum Content Standards for Clinical Education, Curriculum Content, Structure, Composition, and Duration, as well as the Interrelation between the Curriculum, Medical Practice, and the Health Care System).
4. Academic Personnel (Academic personnel in medical education institutes are required to possess a minimum of a Master's degree (S2) level.)
5. Execution of the Program and Oversight of Clinical Education (Governance, Administrative, and Management Personnel).

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The concluded data will serve as a basis for decision-making to improve the program, with a greater emphasis on qualitative data than quantitative analysis.

4. Results

4.1. Evaluation Results

Clinical education at the professional level is a phase medical students must complete to become doctors. At this stage, students are faced with real situations that they will face every day as doctors in the future. It is similar to Peer-Assisted Learning (PAL), which has been extensively adopted in nursing education, especially in simulation-based settings, to improve clinical learning for both junior and senior students (Aljahany et al., 2021). This instructional and organizational framework enhances the acquisition of novel clinical skills among junior learners while simultaneously fostering the development and reinforcement of pedagogical competencies among senior students (Aydin et al., 2022; Dumas et al., 2015; Stables, 2012). In the previous stage of education, students have indeed received a lot of theories, knowledge, and skills. However, the knowledge gained in class cannot be fully understood until they face real situations that require analyzing, evaluating, modifying, and applying what they already know. In the clinic, students need time to process and understand their experiences, drawing on the knowledge they have gained and their personal experiences. In this case, the role of a mentor is needed. Clinical education mentors bridge the gap between the theories students learn in undergraduate education and the practice of clinical education in real hospitals, and therefore, facilitating the clinical education process is very important for students' learning in the hospital. The most important thing in clinical education is the process of integrating experience with the theory learned in class.

4.2. Context Evaluation

Knowing the policy of the clinical education program in higher education (Faculty). The results of interviews and document studies on the policy of clinical education program in higher education (Faculty). The policy of clinical education program in higher education (Faculty) has been included in the 2013 academic guidebook. The context evaluation in this study, by assessing the results of the evaluation of the components of the clinical education program policy in the faculty, turned out to have 4 aspects, namely: Government Policy; FK-UKI Policy; Vision, Mission, and Objectives; and Academic Autonomy. The results of the context evaluation can be seen in the following table.

Table 2. Context evaluation results

No.	Indicator / Description	Findings / Explanation
1	Vision, Mission and Objectives of Clinical Education	There are Vision, Mission, and Objectives for clinical education. Based on documentation, interviews, and observations, FK UKI currently has a Vision, Mission, and Objectives formulated to meet the community's needs. The Vision, Mission, and Objectives are disseminated through meetings and new-student orientations, or displayed in places that are easy to see around campus. Meanwhile, the Vision, Mission and Objectives of Clinical Education at the time this research was conducted did not exist.

2	Academic Autonomy in the Implementation of Clinical Education Lecture Activities	There is an authority that has to carry out Clinical Education lecture activities in accordance with the vision, mission and objectives of Clinical Education. Educational institutions have academic freedom in order to implement the vision, mission and objectives of FK UKI in accordance with the applicable vision, mission and regulatory framework, namely Law of the Republic of Indonesia No. 20 of 2003 concerning the National Education System and Law of the Republic of Indonesia No. 29 of 2004 concerning Medical Practice as well as the regulation of the Indonesian Medical Council No. 10 of 2012 concerning the Standards of Professional Education for Indonesian Doctors. However, this autonomy is still aligned with the UKI Medical Faculty's vision, mission, and goals and has not followed Clinical Education's vision, mission, and goals.

The above data was obtained from the results of interviews based on meetings with the Dean, Pudek I, and Head of the FK-UKI Profession Section, and document studies and field observations at the Faculty of Medicine, Universitas Kristen Indonesia, regarding the policy of the clinical education program at the college level (Faculty). The policy of the clinical education program at the college level (Faculty), has referred to Law of the Republic of Indonesia No. 20 of 2003 concerning the National Education System; Law of the Republic of Indonesia No. 29 of 2004 concerning Medical Practice and its implementing regulations; Doctor Competency Standards; Regulation of the Indonesian Medical Council No. 10 of 2012 concerning the Standards of Professional Education for Indonesian Doctors. With the Vision: Making the Faculty of Medicine Excellent and Competitive in the global era based on Christian values, and MISSION: Producing doctors who can provide primary health services based on Christian values; Producing doctors who excel in traumatology and tropical diseases; Producing doctors who are able to research and carry out continuous community service (interview on April 24, 2013, attachment 41 page 391). The results of the study concluded that the Evaluation of the Clinical Education Program at the Faculty of Medicine, Christian University of Indonesia on the component of the Clinical Education Program Policy at the university level (Faculty) was in accordance with the context of the CIPP model. The context evaluation above aligns with the dental program's context analysis, which stated that a postgraduate dental program's framework must impart specific knowledge and cultivate abilities that exceed those acquired during undergraduate education. Endodontic postgraduate programs must offer students comprehensive experiences and instruction in all facets of the specialization. The European Society of Endodontology (ESE) has delineated curriculum standards for programs that train endodontic experts, outlining the aims and objectives, syllabus content, advanced training requirements, and a multidisciplinary approach to the management of endodontic diseases (European Society of Endodontology et al., 2010).

4.3. Input Evaluation

The input evaluation assesses the components of the Program Design Evaluation related to the following 6 components:

1. Students
2. Clinical Education Supervising Doctors
3. Facilities and Infrastructure
4. Curriculum
5. Clinical Education Resources (57 Doctors)
6. Implementation of clinical education programs and administration (Each section has at least 1 employee

The evaluation results can be seen in Table 3 below:

Table 3. Input evaluation results

No.	Indicator / Description	Findings / Explanation
1	Vision, Mission and Objectives of Clinical Education	There is a Vision, Mission, and Objectives regarding clinical education. Based on documentation, interviews, and observations, FK UKI currently has a Vision, Mission, and Objectives formulated to meet the community's needs. The Vision, Mission and Objectives are disseminated through meetings, new student orientations, or displayed in places that are easy to see around the campus. Meanwhile, the Vision, Mission and Objectives of Clinical Education at the time this research was conducted did not exist.
2	Academic Autonomy in the Implementation of Clinical Education Lecture Activities	An authority must carry out Clinical Education lecture activities in accordance with Clinical Education's vision, mission, and objectives. Educational institutions have academic freedom in order to implement the vision, mission and objectives of FK UKI in accordance with the applicable vision, mission and regulatory framework, namely Law of the Republic of Indonesia No. 20 of 2003 concerning the National Education System and Law of the Republic of Indonesia No. 29 of 2004 concerning Medical Practice as well as the regulation of the Indonesian Medical Council No. 10 of 2012 concerning the Standards of Professional Education for Indonesian Doctors. However, this autonomy is still aligned with the UKI Medical Faculty's vision, mission, and goals, but it has not followed Clinical Education's vision, mission, and goals.

Input Evaluation – Students

Evaluation Stage	Aspects	Criteria	Evaluation Result (Data/Facts)
Input Evaluation	Students	There are requirements for students to undertake clinical education.	According to the research results, students must undertake clinical education: pre-clinical students must complete the administrative requirements and be declared to have passed the Pre-Clinic by the Undergraduate Medical Study Program Manager. These requirements are contained in the Academic Guidebook and have

been socialized in the announcements in the faculty.

The number of clinical education students is in accordance with government policy. Currently, 115 students are taking part in the UKI Medical Faculty Clinical Education. The Clinical Education Committee determines this number. The number of clinical education students is not the same as the number of students in a class, because not all students can participate in clinical education. Students who can continue to clinical education have passed the Pre-Clinic.

Clinical Education Resources

Evaluation Stage	Aspects	Criteria	Evaluation Result (Data/Facts)
Input Evaluation	Clinical Education Resources	The curriculum content is in accordance with the Doctor's Competency Standards.	The UKI Medical Faculty clinical education curriculum includes the principles of scientific methods, biomedical sciences, clinical medical sciences, humanities, community medical sciences, and family medical sciences, all of which align with the Doctor's Competency Standards.
Input Evaluation	Clinical Education Resources	Structure, Composition, and Duration of Curriculum according to Doctor Competency Standards.	The curriculum structure comprises two stages: the undergraduate medical stage and the professional medical stage.
Input Evaluation	Clinical Education Resources	There is a relationship between the Curriculum and Medical Practice and the Integrated Health Service System.	Clinical Education students at the UKI Medical Faculty must gain field learning experience in the Health Service System which is actually included in the curriculum.
Input Evaluation	Clinical Education Resources	Academic staff at medical education institutions must have at least an academic qualification equivalent to a Master's (S2).	From interviews and documentation studies, it is known that not all staff, academic assistants, or clinical supervisors hold Master's qualifications, and not all hold the rank of Lecturer or above.
Input Evaluation	Clinical Education Resources	All academic staff must receive training in medical education methodology and hold a teaching certificate in	Based on interviews and documentation, all academic staff have received training in medical education

		accordance with Law No. 14 of 2005 of the Republic of Indonesia concerning Teachers and Lecturers.	methodology and hold teaching certificates in accordance with the law.

Clinical Education Supervising Doctor, Facilities, and Curriculum

Evaluation Stage	Aspects	Criteria	Evaluation Result (Data/Facts)
Input Evaluation	Clinical Education Supervising Doctor	Have a decree from the Director as a Clinical Education Supervisor (Decree No. 30/SKB/FK.UKI/06.2012, 21/IKS/DRIUT/RSUKI/01.2012).	The supervising doctor is assigned as a Clinical Education Supervisor with a decree from the Director. This provision was discussed in a dean's level meeting but was not documented.
Input Evaluation	Facilities and Infrastructure	There are facilities and infrastructure that comply with the Standards for Facilities and Infrastructure for Postgraduate Higher Education Programs and Profession (BSNP, 2011).	Complete infrastructure and facilities exceed the standards required by KKI.
Input Evaluation	Curriculum	Clinical Education is developed based on a competency-based curriculum.	The competency-based curriculum model is implemented through an integrated, horizontal and vertical approach and is oriented towards individual, family, and community health problems within the context of primary health services.

Input Evaluation – Clinical Education Resources and Administration

Evaluation Stage	Aspects	Criteria	Evaluation Result (Data/Facts)
Input Evaluation	Clinical Education Resources	The curriculum content is in accordance with the Doctor's Competency Standards; the structure, composition, and duration of the curriculum are in accordance with the standards; the relationship between the curriculum, medical practice, and the health system; and academic staff qualifications and methodology training.	The UKI Medical Faculty's clinical education curriculum includes scientific, biomedical, clinical, and community sciences, aligned with the Doctor's Competency Standards. Curriculum has two stages: undergraduate and professional. Students gain field experience integrated into the Health Service System. However, not all supervisors hold Master's degrees or lecturer ranks; all staff, however, have received training in medical education methodology and possess teaching certificates in accordance with Indonesian law.
Input Evaluation	Clinical Education Supervising Doctor	Supervising doctors must have a Clinical Education Supervisor decree from the Director.	Supervising doctors are formally appointed through decrees (e.g., Decree No. 30/SKB/FK.UKI/06.2012, 21/IKS/DRIUT/RSUKI/01.2012). Although discussed at the dean's

			level, not all documentation was retained.
Input Evaluation	Facilities and Infrastructure	Facilities and infrastructure should meet or exceed BSNP (2011) standards for postgraduate and professional education.	Infrastructure and facilities exceed KKI requirements, enabling effective clinical education.
Input Evaluation	Curriculum	Clinical Education should be developed based on a competency-based curriculum.	The competency-based curriculum uses an integrated horizontal and vertical approach, focusing on individual, family, and community health problems within primary health services.
Process Evaluation	Implementation of Clinical Education Programs and Administration	Governance, administrative, and management staff must comply with institutional and government provisions.	Interviews and employee placement documents show that not all sections have dedicated administrative staff; positions are often combined with secretarial roles, limiting service efficiency. Source: Interview with the Director of UKI Hospital (April 24, 2013, Attachment 42, Page 393).

The results of the input evaluation, using interview methods, document study and observation, show that the program design consisting of: Students in clinical education, Clinical education supervising doctors, Facilities and Infrastructure, curriculum, Clinical Education Resources and Implementation of clinical education programs and administration have met the criteria in Law of the Republic of Indonesia No. 20 of 2003 concerning the National Education System and Law of the Republic of Indonesia No. 29 of 2004 concerning Medical Practice and its implementing regulations as well as the Regulation of the Indonesian Medical Council No. 10 of 2012 concerning the Standards of Professional Education for Indonesian Doctors. The weaknesses identified by researchers, based on interviews with the head of the clinical education section, the head of the UKI Medical Faculty, and the head of the UKI Hospital, are that not all staff/academic assistants/and clinical supervisors hold S2 qualifications and rank at Lecturer or above. Academic staff/assistants/clinical supervisors, even though they do not have a Master's degree, are assigned to supervise in the clinical section because the academic staff have had sufficient experience in the clinic and have been equipped by participating in seminars or short courses on matters that are part of it, so they are considered to have sufficient ability to guide students in learning in the clinic (Setiabudi, 1999; Sumadi & Aditya, 2007; Vaughn, 1983). It is also similar to the research study, which provides general information for the input stage, stating that most dental schools require clinical experience and a high Grade Point Average from an initial dental degree as prerequisites for admission to the postgraduate program. In contrast, certain universities consider additional factors such as clinical experience, interviews, professional references, and practical assessments. 21% of colleges do not accept international applications. In 42.4% of the institutions, the prerequisites for international and local applicants are identical (Nagendrababu et al., 2025).

Based on the results of the document review and the program design conducted at the Faculty of Medicine, Universitas Kristen Indonesia, the program design has been in accordance with the provisions of the program design standards/input in the CIPP model. However, weaknesses were found in the qualifications of academic staff, some of whom do not yet have academic qualifications equivalent to the Magister program (S2).

4.4. Process Evaluation

Evaluation of the process of assessing:

1. Clinical Education Planning
2. Implementation of Clinical Education
3. Evaluation of Clinical Education
4. Supervision and monitoring.

The evaluation results can be seen in Table 4 below:

Table 4. Results of process/implementation evaluation

Evaluation Stage	Aspects	Criteria	Evaluation Result (Data/Facts)
Process Evaluation	Clinical Education Planning	FK UKI has standards for the design of Clinical Education. FK UKI conducts the development of the clinical education syllabus. FK UKI conducts the development of the Clinical Education Learning Plan.	Clinical Education Planning is developed in accordance with applicable standards and regulations. UKI Medical Faculty has a clinical education syllabus developed in line with needs and KKI standards. The clinical education plan provides opportunities for students to acquire clinical knowledge and skills as well as professional attitudes necessary for independent responsibility as physicians.
Process Evaluation	Implementation of Clinical Education	Clinical Education has met the requirements for implementing standard learning processes.	The conformity includes preliminary, core, and closing activities. Evidence is obtained from interviews, document reviews, letters from the Deputy Dean/Head of the Medical Profession Department, student logbooks, and schedules maintained by the Head of the Medical Profession Program.
Process Evaluation	Evaluation of Clinical Education	FK UKI conducts evaluations of Clinical Education.	FK UKI conducts clinical education evaluations by assessing the learning process and outcomes.
Process Evaluation	Supervision and Monitoring	FK UKI supervises and monitors the implementation of clinical education.	Interviews and annual work meeting documents show that at the final stage of clinical education, students' implementation is evaluated by all clinic lecturers and leadership. Deficiencies and obstacles during clinical education are discussed in meetings between supervising lecturers and the leadership.

The above results can be seen in the results obtained from interviews with leaders at the Faculty of Medicine, Indonesian Christian University, and document studies that clinical education planning, implementation of clinical education, evaluation of clinical education, and supervision and monitoring have been carried out in accordance with the criteria determined in the process evaluation component. The obstacles identified in this study are based on the results of interviews with students and document studies, which show that in each round, not all the lists of diseases in the student logbook are found in the hospital, because the cases or diseases encountered depend on the patients who come for treatment. To address these deficiencies, students are referred to affiliated or network hospitals if the case is similar to the one they are studying. However, if in one round one of the cases/diseases is not found in the list of diseases that must be studied in the student log book at the UKI hospital, affiliated hospitals or network hospitals, then to fulfill the learning the supervising doctor gives a case study in the form of a simulation and students are given the task of analyzing and giving opinions about the case. The number of students admitted varied across the dentistry schools. The relevant framework is also evident in endodontic education, which states that admission numbers for the course varied across dental schools. The majority of schools admit students annually. The majority of institutions also offered a comprehensive full-time postgraduate curriculum in endodontics. The recent survey indicated that only specialized endodontists participated in postgraduate instruction at specific institutions. Undergraduate instruction in endodontics adhered to a comparable framework (Nagendrababu et al., 2024). An adequately competent faculty is the primary prerequisite for a satisfactory advanced education training program. Faculty must be included on the national endodontic specialist registry, if available, in countries where such a registry exists (European Society of Endodontology et al., 2010; Rossi-Fedele et al., 2020).

4.5. Product Evaluation

Product evaluation in this study, assessing the graduate components and Continuous Updates, is shown in table 5 below.

Table 5. Product evaluation results

Evaluation Stage	Aspects	Criteria	Evaluation Result (Data/Facts)
Process Evaluation	Implementation of Clinical Education	Clinical Education has met the requirements for implementing learning processes in accordance with established standards.	The conformity includes preliminary, core, and closing activities. Evidence is derived from interviews, document studies, and supporting records such as student logbooks, schedules from the Head of the Medical Profession Program, and letters from the Deputy Dean or Head of the Medical Profession Department.
Process Evaluation	Learning Process	FK UKI implements the learning process in accordance with the procedures and requirements of clinical education.	Learning activities are conducted according to structured phases, including pre-clinic preparation, hands-on clinical exposure, and closing evaluations. These processes are verified through interviews, document analyses, and internal academic reports.

The results obtained from interviews with leaders at the Faculty of Medicine, Christian University of Indonesia, students, educators, alumni and document studies that there is evidence of graduates and continuous updates carried out by the Faculty of Medicine, Christian University of Indonesia produce doctors who have practice competencies, mastery of attitude competencies, and are given the title of general practitioner. This demonstrates that the product results align with the mission and objectives of the Faculty of Medicine at the Christian University of Indonesia. One of the missions of the Faculty of Medicine, Christian University of Indonesia, is to produce doctors who can provide primary health care services based on Christian values and who excel in traumatology and tropical diseases. With the existence of competency graduation standards, the product results have met the criteria set for the Evaluation of the Results of the implementation of the CIPP model program/product. Based on the results of the document review, the Faculty of Medicine, Christian University of Indonesia, has produced 3,909 doctors through the product evaluation in this study. The curriculum varies across universities; nonetheless, the number of nations represented in the current survey is sufficient to address geographical disparities. Countries not participating in the present poll will be encouraged to engage in a similar study in the future. The current study primarily focused on the information provided by a single faculty member at the dental school. In the future, a survey may be administered with the involvement of the program leader or the discipline head to obtain more precise, validated information on the curriculum (Nagendrababu et al., 2025).

4.6. Digital Media Utilization

The growing adoption of digital health technology in modern healthcare signifies a significant shift towards enhancing patient care, optimizing clinical processes, and improving the overall efficiency of the health system. This study underscores the significance of these technologies while providing a comprehensive analysis of healthcare professionals' usage trends, benefits, and associated challenges. This study enhances our understanding of technology adoption by analyzing the integration of digital health technologies into clinical practice. It expands upon prior research by meticulously examining the elements influencing their implementation and effectiveness.

The perceived benefits of digital health technology, including enhanced workflow optimization, improved patient management, and heightened diagnostic accuracy, correspond with research emphasizing their positive impact on clinical outcomes and operational efficiency (Willis et al., 2022).

Reports indicate that digital health technology can significantly enhance healthcare delivery by reducing administrative hassles and increasing patient engagement. Nonetheless, technological impediments like as system interoperability, software malfunctions, and network issues continue to hinder their widespread use. These challenges emphasize the necessity for more resilient, reliable, and accessible solutions that integrate with existing healthcare systems (Ziliotto, 2019).

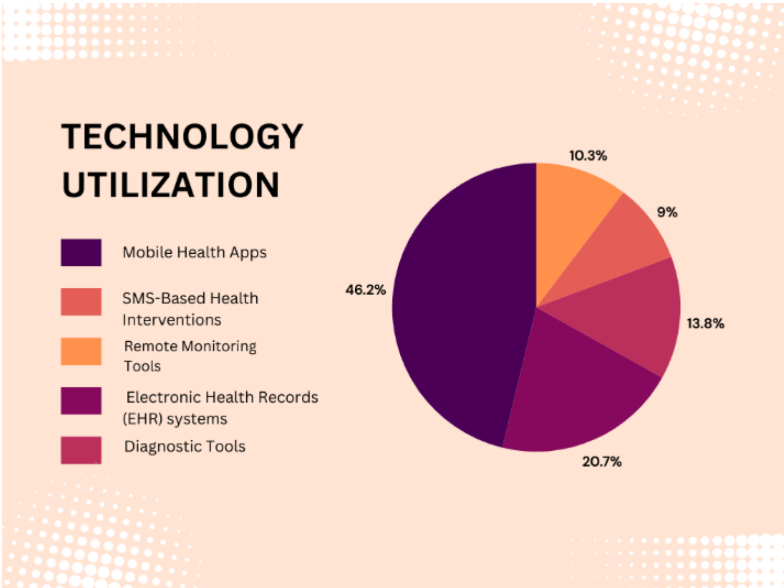

Figure 1. Technology Utilization Distribution

The evaluation results indicated trends in respondents' utilization of digital health tools. Mobile health applications were the most prevalent technology, with 46.2% of respondents reporting usage. Electronic Health Records (EHR) systems and diagnostic tools were used by 20.7% and 13.8% of respondents, respectively, indicating moderate acceptance in clinical practice.

Notably, only 9% of respondents reported using SMS-Based Health Interventions, while 10.3% reported using Remote Monitoring Tools. These results indicate that whereas many digital health solutions are widely utilized, others may face adoption challenges such as lack of awareness, cost, or accessibility.

5. Discussion

The clinical education program policy at the Faculty of Medicine, Christian University of Indonesia is formulated based on applicable regulations, namely Law of the Republic of Indonesia No. 20 of 2003 concerning the National Education System, Law of the Republic of Indonesia No. 29 of 2004 concerning Medical Practice and its implementing regulations, Doctor Competency Standards and Regulation of the Indonesian Medical Council No. 10 of 2012 concerning the Standards of Professional Education for Indonesian Doctors. The policies of the Faculty of Medicine, Christian University of Indonesia, are outlined in the Academic Guidelines for the UKI Faculty of Medicine. The Academic Guidelines contain the Vision, Mission and Objectives of the UKI Faculty of Medicine. The description and rules of education at the UKI Faculty of Medicine are clearly stated in the Academic Guidelines. The goal of medical education at the Faculty of Medicine, Christian University of Indonesia (FK UKI) is to prepare graduates to compete at the national and international levels by providing knowledge, attitudes, skills, and abilities to solve health problems and challenges in the 21st-century global era. Graduates of the Faculty of Medicine, Christian University of Indonesia (FK UKI) are expected to possess knowledge, skills, attitudes, and behaviors in their professional field as doctors, able to provide early health services that apply medical principles within the national health service system and to compete globally. The enactment of the Medical Practice Law, the formation of the Indonesian Medical Council (KKI), and several regulations regarding other health services have had a positive impact on health services and medical practice in Indonesia. These changes also affect the learning process of medical students, especially during the clinical education stage, which requires them to prioritize patient safety and comfort (Kurikulum dan Silabi Fakultas Kedokteran Universitas Kristen Indonesia, 2008).

The explanation can be seen that clinical education aims to integrate theory with practice. Clinical education not only allows students to apply theories learned in previous classes but also helps them develop critical thinking skills. In clinical education, students are exposed to real practices that they will encounter later if they graduate to become doctors. In clinical learning, students are required to make clinical decisions that integrate theory, law, knowledge, principles, and specialized skills. No less important is how health workers accept clients as whole, unique, and independent living beings with their inseparable rights. During clinical practice, students can experiment with applying concepts and theories to practice, solve problems, and develop new forms of care (Sneil, 2007; Taba, 2012; Tilaar, 1997).

The use of clinical practice guidelines (CPGs) has proliferated globally to guide optimal health practices and enhance healthcare investments. A clinical practice guideline (CPG) is defined as "any formal statements systematically developed to assist practitioner and patient decisions regarding appropriate health care for specific clinical circumstances" (Field & Lohr, 1990). It has the potential to enhance patient care by advocating for interventions with demonstrated efficacy and dissuading ineffective treatments (Freitas et al., 2024).

The results of in-depth observation/survey related to the description of input evaluation at the Faculty of Medicine, Christian University of Indonesia, have met the standards set in the academic guidebook of the Faculty of Medicine, Christian University of Indonesia. The evaluation of the program design focuses on the following six components: Students, Clinical Education Supervisors, Facilities and Infrastructure, Curriculum, Clinical Education Resources, and the Implementation of clinical education programs and administration. The evaluation obtained is as follows: Requirements for participating in clinical education for UKI Medical Faculty students have been in accordance with the KKI's rules and standards, as stated in the 2013 Academic Guidebook. UKI Medical Faculty students must pass pre-clinical education, consisting of 25 blocks: mandatory blocks and elective blocks (block 25). The Competency-Based Curriculum (KBK) Block System integrates all medical

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disciplines into a single block through several models and learning activities that emphasize student-centered and lifelong learning (Felicinao, 2008; Fitzpatrick, 2004).

The Indonesian Medical Council (KKI) claims that the Bachelor of Medicine block structure applies only to the Faculty. Semester credit units (SKS) weight courses or blocks. A course or block can have credit weights. Each level has a credit load and semester/block length. The Learning Program has modules organized into blocks for study in various circumstances. Students taking multiple courses are evaluated at the conclusion of the block/semester. Lecturers use evaluation results too. The Christian University of Indonesia Medical Faculty comprises two phases: the first semester comprises 9 blocks, and the second, 16 (semester 3-7). Semesters are 20 weeks and 20 credits. After the semester, five weeks of holidays can be used to retake failed block exams. Semester I blocks 1, 2, and 3 must be completed to participate in semesters III and IV blocks. Retake the exam during the holidays if you fail. If blocks 1, 2, and 3 Tutorials fail, students must retake them in semester I the following year. The semester block must be retaken over break for failing students. If they fail, students must retake the block in the same semester the following year. Semester III to VII blocks are not requirements (failing one does not prevent progression). Students who fail semester VII can take remedial courses in VIII. Semesters III to VII blocks that have not been passed can be retaken during each end-of-semester holiday, up to two blocks each semester, or the block's usual activities. Students must complete phases I and II before entering phase III (clerkship).

Product/process evaluation in this study, with the implementation of clinical activities at the Faculty of Medicine, Christian University of Indonesia, is identified into four aspects: Clinical Education Planning, Implementation of Clinical Education, Evaluation of Clinical Education, and Supervision and monitoring (Tayibnapis, 2008).

Clinical Education Planning at the Faculty of Medicine, Christian University of Indonesia, has referred to and adopted the KKI rules. Clinical education activities are designed to provide a balanced portion between clinical reasoning and evidence-based medicine skills training. The proportion of the medical education schedule is prepared by the education coordinator of each Section/Department/SMF (Srivastava & Sarita, 2000).

The Head or Dean of the Faculty of Medicine, Christian University of Indonesia along with the Directors of the General Hospital of Christian University of Indonesia plan and determine clinical education programs that refer to the Professional Education Standards for Doctors/Dentists, Specialist Doctors/Dentists and Competency Standards for Doctors/Dentists, Specialist Doctors/Dentists with clear/concrete educational objectives, firm competency limits and stated in the guidebook

Based on the results of interviews and field data, it can be seen that the implementation of clinical education has been in accordance with the established rules. Students who have met the requirements to participate in clinical education are given an introduction and a schedule, along with a logbook, by the Dean of the Faculty of Medicine, Universitas Kristen Indonesia. The introduction letter is addressed to the hospital where the student will participate in clinical education. Before the student participates in clinical learning, the clinical supervisor provides direction on what the student and the supervisor will do. In this clinical learning, students can ask the supervisor about cases encountered and discuss them. The clinical supervisor assesses students participating in clinical practice learning and prepares a learning report during the clinical practice. This clinical learning activity is supervised or monitored by functional medical staff assigned by the hospital director. In addition, to observe and evaluate learning in the clinic, the clinical supervisor is required to complete the attendance form.

According to reports, the use of digital health technology can significantly improve the delivery of healthcare services by reducing administrative work and increasing patient interaction. However, technological hurdles such as software bugs, network issues, and system compatibility continue to prevent their widespread use. These difficulties highlight the need for solutions that are more resilient, reliable, and accessible, and that are compatible with existing healthcare systems. The evaluation found patterns in how respondents used digital health technologies. Mobile health applications were the most widely used technology, with 46.2% of respondents reporting use. A modest level of adoption was observed in clinical practice, as indicated by 20.7 percent of respondents reporting the use of diagnostic tools and 13.8 percent reporting the use of electronic health record (EHR) systems. It is worth noting that only 9 percent of respondents reported using SMS-based health interventions, and 10.3 percent reported using remote monitoring tools. The outcomes of this study suggest that although many digital health solutions are widely used, others may encounter difficulties in adoption due to factors such as lack of awareness, cost, or accessibility.

Regarding the product evaluation in this study by assessing the graduate components and Continuous Updates can be seen in the level of graduation of doctors who meet the competency standards and are approved by the Indonesian Medical Council (in accordance with Article 8 of Law of the Republic of Indonesia No. 29 of 2004 concerning Medical Practice), namely the Doctor's Competency Standards that graduates are expected to be able to follow the development of medical science and participate in the National Health System.

Regarding the results obtained from interviews with leaders at the Faculty of Medicine, Christian University of Indonesia, students, educators, alumni and document studies that there is evidence of graduates and Continuous Updates carried out by the Faculty of Medicine, Christian University of Indonesia, producing doctors who have practice competencies, mastery of attitude competencies, and are given the title of general practitioner. This demonstrates that the product results align with the mission and objectives of the Faculty of Medicine at the Christian University of Indonesia.

One of the Missions of the Faculty of Medicine, Christian University of Indonesia, is to produce doctors who can provide primary health care based on Christian values and who excel in traumatology and tropical diseases. With the existence of competency graduation standards, the product results have met the criteria for the Evaluation of the Results of the program/product under the CIPP model.

Therefore, based on the results of the document review and the product evaluation in this study, the Faculty of Medicine, Christian University of Indonesia, has produced 3,909 doctors, spread throughout the country. The criteria are based on the Graduation Judicial Document and a decree from the dean that lists the names of students who graduated from the medical education program, as well as those sworn in to become doctors. Furthermore, students who are declared to have graduated from clinical education are expected to become doctors with the competencies required by the KKI. The existence of continuous renewal can be demonstrated after the activity, with the decision based on the results of the evaluation carried out during students' clinical education, and by seeking ways to overcome the obstacles faced by students so that they do not recur. Therefore, the results of the product evaluation are compared with the evaluation criteria for the Faculty of Medicine, Christian University of Indonesia program, with the recommendation: Graduates of the UKI medical program can and are ready to compete, as they pay attention to the formulation of BAN PI and KKI.

The use of monologues is the third aspect of themed textbooks in vocabulary comprehension. Self-talk is a monologue. The books' monologues are meant to teach kids how to talk and write properly. From the beginning of the class until its conclusion, the teacher's explanation and voice are heard throughout the monologue (Nesari, 2015). This speech can be done internally. Children who read aloud and write silently might also experience this process (Ivanova, Horton, Swets, Kleinman, & Ferreira, 2020; Schauer, 2019). The child's memory will improve as a result of this language-learning

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technique. Children's activities that use monologue include writing vocabulary, thickening letters, linking words to symbols that represent them, etc.

Comments and requests make up the fourth element of vocabulary comprehension in themed textbooks. Children and other people interact by commenting and making requests. In the book's dialogue exercises, comments, requests, and commands are provided. Children are encouraged to communicate their opinions via conversational activities about how they are feeling. In the meanwhile, requests are evident when children ask others to do something. When young children ask their companions to do something, they are also issuing commands. Additionally, requests and remarks may be made in the dialog (Sybing, 2021). Dialogue, according to Barekat and Mohammadi (2014), can significantly improve children's speaking skills. The teacher's contribution to children's conversations and comprehension of discourse is crucial (Teo, 2016; Rapanta & Christodoulou, 2019). Children's vocabulary might expand either directly or indirectly as a result of the dialogue and discussion.

Question-and-response is the fifth element in themed textbooks for comprehending language. Regarding questions that may be answered in connection with the book and that are correlated with the students' culture, questions and answers are provided (Beerwinkle & McKeown, 2021). When the teacher gives instructions to the students, this question-and-response is also included in the textbooks. This question-and-response period, after the teacher presents the topic, is typically used to push students on concepts they may not have fully grasped. It is said that this question-and-response format will help children's memory (Henry & Roediger, 2018). The query and response are also included in the introduction and conclusion. The question and response first occurred during the warm-up action. The teacher often uses a question-and-answer format to recap the prior lesson during this exercise. This process also happens when people repeat or recollect information. Asking about the results of the research conducted from morning until that time is an activity of identification. Additionally, a question-and-answer session can highlight a child's skills (Florensa, Bosch, & Gascon, 2020). When answering questions, children actively use their language. The repetition of this vocabulary will increase the number of new words children know.

A unified national framework is urgently required at the policy level to guide digital media instruction, evaluation, professional development, and utilization, especially in clinical education within the faculty of medicine. This should encompass pragmatic implementation guidelines and incentives, such as innovation grants, to promote effective and inclusive digital transformation in higher education. Subsequent research should build on this work by monitoring institutional adaptations over time, investigating the impact of various devices—such as cellphones, laptops, or tablets—on learning outcomes, and analyzing hybrid learning models tailored to specific academic disciplines. These measures are essential for advancing the Indonesian clinical education program towards a sustainable, inclusive, and equitable digital education system, one that evolves into a long-term plan for national development rather than a temporary remedy during crises.

6. Conclusion

Clinical Education for students of the Faculty of Medicine at Christian University of Indonesia is a phase that medical students must complete to become doctors. Where students are faced with real situations that they will face every day as doctors. Clinical Education carried out by students of the Faculty of Medicine, Christian University of Indonesia, is regulated by procedures issued by the Indonesian Medical Council (KKI).

The success of the clinical education program produces general practitioners with competencies demonstrated through OSCE and CBT exams, and they are ready to compete in the era of globalization. The policy of the clinical education program at the Faculty of Medicine, Universitas Kristen Indonesia, has been referred to the Law of the Republic of Indonesia No. 20 of 2003 concerning the National Education System; the Law of the Republic of Indonesia No. 29 of 2004 concerning Medical Practice; and its implementing regulations. Clinical education differs globally in its preclinical and clinical training. The survey offers initial insights that can help establish mutual educational standards and key focus areas, including the curricula for preclinical and clinical education programs, which vary globally.

7. Suggestion

The researchers advise Universitas Kristen Indonesia, especially the Clinical Education Program, Faculty of Medicine, to further support the advancement of learning media based on digital perspectives for consistent, systematic use by all lecturers and prospective students. Confronting these problems is crucial for improving the quality and inclusivity of Technology Utilization Distribution. Research on digital education in underdeveloped countries underscores the imperative for government action to expand internet access, provide affordable digital resources, and support faculty training programs. The possible ramifications of using digital media in clinical education include greater efficiency, optimized information acquisition, and time-saving benefits. Future studies are necessary to investigate the effects of AI-based technologies on clinical education, including quality, student and staff satisfaction, and the enhancement of critical thinking skills. Continuous research and assessment are crucial for successfully integrating digital tools, such as mobile health applications, into clinical education while addressing potential issues and constraints.

8. Limitation

Although the results are significant, the study has limitations because the learning media are dedicated solely to the faculty of medicine in the clinical education category, as in this study. Moreover, it specializes in a particular study or course in media utilization. Consequently, the forthcoming study should include larger, more diverse samples from various institutions and conduct quantitative analyses to assess the influence of the distribution of technology use on various facets of clinical education, both in Indonesia and globally. Longitudinal studies may be undertaken to analyze the evolution of perceptions and the application of digital technology over time, as well as to assess the enduring impacts of its incorporation into students' clinical education programs.

Declarations

Author Contributions. D.S.: Conceptualization, design, analysis, data acquisition, Data analysis/ interpretation, statistical analysis. B.S.: writing, editing/reviewing, supervision, administration, technical or material support. All authors have read and approved the published version of the article.

Conflicts of Interest. The authors declare no conflict of interest.

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Ethical Approval. All the participants in this study were notified of its intentions. Every participant has duly executed a confidentiality agreement and a data transfer form. Similarly, all data has been de-identified, ensuring the confidentiality of the participants.

Data Availability Statement. The Institutional Review Board authorized all data collection and storage protocols as an exempt study for program enhancement. Participant identifiers were removed to ensure anonymity.

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