

Research article

Collaborative Governance for Online Distance Learning: A Case of a Dental Health Program of the Ministry of Health Bandung

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Online learning is a strategic policy that is expected to contribute to the sustainability of educational performance. However, this policy has not been able to optimally solve existing problems. Shortcomings of students in attaining skills from core competency courses and the lecturers' limited ability to provide online learning are problems faced by the Bandung Polytechnic Diploma III Dental Health Study Program. This study employed a literature review approach. We compiled a comprehensive collection of relevant studies by identifying collaboration theories; this was strengthened by including research related to distance learning collaboration in the health sector associated with Poltekkes Bandung's SWOT. The results of this study suggested that the problems faced by the Dental Health program can be overcome through strengthening collaborative governance. Poltekkes Bandung can issue a policy to collaborate with the Faculty of Dentistry; they can thereby tackle the problem of students achieving core competencies and improve the capacity of lecturers to provide teaching by collaborating with educational institutions that have consistently held online distance learning.

Keywords: collaborative governance, distance learning, Poltekkes Bandung

1. Introduction

Online learning has been widely carried out to provide a wide range of learning processes to students (Anjana, 2018). Belawati (2020) stated that online learning can be referred to as distance learning. Designing distance learning to be more effective in the era of digital technology, as described by Dhawan (2020) focuses on using technology more efficiently and effectively to facilitate the educational process. However, in responding to online distance learning policies, they are often faced with problems with internet network facilities that are still not evenly distributed, the funds that must be spent for the procurement of internet quotas (Syah, 2020), the limitations of learning application features (Hutauruk & Sidabutar, 2020), and many teachers and lecturers who lack competency in technology use, despite that we are now living in the digital era

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(Siregar, 2020). In addition, as explained by Sundayana (2020), who conducted research on the nursing study program, stated that in his study, most of the respondents did not know the course objective, online learning was even considered ineffective.

The Diploma III Dental Health Study Program (hereinafter referred to as PS D III Dental Health) is a government-owned vocational education institution (Ministry of Health) within the Bandung Poltekkes Work Unit (hereinafter referred to as Poltekkes Bandung) which educates prospective Dental and Oral Therapists at the Diploma III educational level. Based on the Decree of the Human Resource Development Center of the Health Agency Number HK.01.07/III/11667/2016, the profiles of the Diploma III Dental Health graduates are as follows; 1). Implementing Dental and Oral Health Care Services; 2). Dental and Oral Health Promoter; and 3). Implementing Assistance Activities in Dental and Oral Health Services.

There were many challenges in learning at Poltekkes Bandung PS D III Dental Health during the Covid-19 pandemic. The results of the learning evaluation meeting conducted by the managers on July 21, 2021, found that students lacked the skills that was supposed to be gained from the learning of core competency courses and lecturers had limited ability in providing distance learning (Poltekkes Bandung, 2021). In addition, the results of the hearing between study program managers and students conducted on July 26, 2021, the problems raised by students, among others, were related to the availability of internet quota which had an impact on signal strength when students did distance learning. practical course content. In line with this, referring to the report of the Head of the Poltekkes Quality Center of the Ministry of Health Bandung in the second semester period of 2020-2021 school year, it was stated that the Student Satisfaction Index (IKM) of PS D III Dental Health was in poor qualification which only reached 71.52% (Poltekkes of Ministry of Health Bandung IKM, 2021).

Problems in the distance learning process will impact on the formation of student competencies which in turn can affect the abilities they possess in providing dental and oral health care to the community. As stated by Schmitt et al., (2011), that the formation of competence for health professionals provides a transformative direction to improve the health care system and, as also stated by Friedman & Mathu-Muju (2014), the care provided by Dental and Oral Therapists is focused for people who have difficulty in getting access to dental health care. Therefore, the profile of PS D III Dental Health graduates in providing dental and oral health care for clients tends not to be achieved optimally.

Referring to Rettig's opinion (2018), the concept of implementing vocational education emphasizes the application of training and internship activities that can provide

the knowledge, skills, and abilities needed to carry out quality professional activities. Policies for conducting online distance learning that can be carried out by Poltekkes Bandung is aimed to maintain the achievement of graduate competency standards, provide support for the availability of facilities and infrastructure to support practice as well as to increase the knowledge and experience of PS D III Dental Health lecturers in implementing online distance learning.

Collaborative governance is the application of a government administration process carried out to respond to the failure of the implementation of a public policy (Dewi, 2019). Although the practice of collaboration was initially understood as an alternative solution when there was a failure in implementing the policy (Gash, 2017), in the end the practice of collaboration is growing by creating a moderation of professional relationships within an organization (Caldwell et al., 2017). Collaboration between organizations is characterized by positive interactions between structures, processes, and actors (Previtali & Salvati, 2021). In addition to the presence of skills, ideas, and resources (Torfing, 2016) collaboration is sought to increase the effectiveness of organizational performance (Jermsittiparsert et al., 2019).

An important aspect of collaboration is marked by the sharing of benefits (Guajardo & Rönqvist, 2016). In the study of public policy (Fischer & Miller, 2017), collaboration is characterized by the relationship between theoretical and practical aspects of policy makers (Hill & Varone, 2016). Thus, collaboration in terms of public policy is a set of rules to regulate the order of people's lives (Hill & Varone, 2016).

This article was written with the aim of providing solutions in overcoming the problems of the student learning process at PS D III Dental Health through a collaboration scheme that can be carried out by Poltekkes Bandung as a public organization. The solutions offered are related to collaborative efforts to overcome limitations in achieving student core competencies and to overcome the limitations of lecturers in providing online distance learning.

2. Method

This study is descriptive in nature which explains the importance of distance learning collaboration policies that can be carried out by Poltekkes Bandung with other institutions to overcome the learning problems of PS D III Dental Health students. The problems related to distance learning and workable collaboration solutions are identified based on government collaboration theory. A SWOT analysis was carried out to understand

the various strengths, weaknesses, opportunities, and challenges of the Poltekkes Of Ministry of Health Bandung.

2.1. This study is also completely based on secondary data. A systematic review was carried out from several collected literatures, such as: journals, reports, scientific articles, research papers, and other academic publications.

3. Result and Discussion

3.1. Collaboration between Health/Medicine Educational Institutions and Distance Learning Using Internet-Based Media Technology

Distance learning education enables the teaching process at any distance, anytime, from anywhere, increasing educational exchange, flexibility and globalization in medical education. As a public policy process that has provided a clear exploration, using many illustrations, of how policies are made and implemented (Hill & Varone, 2016), Guiter et al., (2021), stated that policies in collaborating in education have been widely used, carried out by various educational institutions in many countries, including in Indonesia. In addition, Smith et al., (2014), stated that, the situation of health care education in the UK is changing rapidly, inter-institutional collaboration bridging the undergraduate and postgraduate fields is increasingly needed. This is also reinforced by the opinion of Hasibuan, (2019), that collaboration and interdisciplinary models are the main foundation in providing high-quality and cost-effective nursing care.

Several studies related to distance learning collaboration conducted by educational institutions are as shown in the following table:

Referring to some of the research results above, as examples of distance learning are used to create further innovations for ENT experts in the future, a model that combines several distance education strategies can be used as a basis for making innovations (Ruthberg et al., 2020). Further collaboration carried out in multi-institutional ways has enabled the didactic education process so that it can expand students' expertise and can reduce the cost burden (Metchik et al., 2021).

During the Covid-19 pandemic, distance learning has enabled the learning process for medical students at any distance, anytime, from anywhere by means of flexible and comprehensive educational exchanges (Guiter et al., 2021). In line with this context, Dental and Oral Therapists as one of the health workers who provide dental health

TABLE 1: Collaborative Research Between Health/Medicine Educational Institutions and Distance Learning Using Internet-Based Technology Media.

Peneliti/Tahun	Judul	Metode Pendekatan	Sampel Penelitian	Hasil
Ruthberg et al., (2020)	A Multimodal Multi-institutional Solution to Remote Medical Student Education for Otolaryngology During COVID-19	Medical students collaborate with residents at the faculty's two main academic centers to identify important otolaryngology topics. Learning materials that have good quality, can be easily accessed, are included in the student education curriculum. Distance learning and multimodal patterns are used as the basis for creating further innovations for ENT experts in the future	Medical students who are interested in pursuing ENT specialist education	The COVID-19 pandemic has encouraged innovation in terms of facilitating alternative modalities to gain student knowledge and skills and student interest in pursuing further education. This context has facilitated multi-institutional collaboration in the subspecialty education of medical students. The model that combines several distance education strategies can ultimately be used as a basis for making further innovations.
Metchik et al., (2021)	How We Do It: Implementing a Virtual, Multi-Institutional Collaborative Education Model for the COVID-19 Pandemic and Beyond	Learning material: Basic Science Vascular Colorectal Endocrine Thoracic Trauma Bariatric/Minimally invasive Pediatric Cardiac Oncology Acute Care Surgery Transplant Critical Care Breast Pancreas Liver Upper Alimentary Tract for medical students at Virginia Commonwealth University is carried out by partnering with expert lecturers who live in close premise and communication is conducted via email. In addition, to reach a wider range of learning materials, the faculty facilitates correspondence by involving participants registered on the Program Director Association's list and Twitter.	General Surgery Division listed on the Association's Program Director listserv and Faculty of Medicine Twitter in 52 states	The multi-institutional collaboration has allowed the didactic education process adopted at Virginia Commonwealth University during the Covid-19 pandemic to be sustainably carried out in the long term. This collaboration can expand expertise, there are variations in learning models for students and can reduce the cost, technical and other burdens that must be borne by the faculty (related to effectiveness and efficiency).

services for the community are needed to participate in a collaborative work in the context of IPC because they can communicate effectively with patients and can provide good dental health education.

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Peneliti/Tahun	Judul	Metode Pendekatan	Sampel Penelitian	Hasil
Luebbers et al., (2021)	Physicians' perceptions of the role of the dental hygienist in inter-professional collaboration: a pilot study	Quantitative descriptive survey to assess the perception of doctors as staff collaborating with Dental and Oral Therapists in IPC activities.	Respondents are 18 doctors who have additional duties in the personnel department who are more than 45 years of age and have work experience of more than 15 years	This survey study provides preliminary information on physicians' perceptions of the role of Dental and Oral Therapists in IPC activities. The doctor stated that the Dental and Oral Therapist has the necessary education to participate in the IPC team because they can communicate effectively with patients and can provide good dental health education. Thus this study has identified that the Dental and Oral Therapist has an important role and brings value to the IPC team
Car et al., (2019)	Digital problem-based learning in health professions: Systematic review and meta-analysis by the digital health education collaboration	The use of Digital Problem-Based Learning (DPBL), is increasingly being used in health professional education. DPBL includes both digitally delivered and mixed problem-based learning, where digital and face-to-face learning are combined.	Involving 890 health professionals to measure the effectiveness of the learning process through Digital Problem Based Learning (DPBL) with traditional learning methods or other forms of digital education.	The learning process through Digital Problem-Based Learning for health professionals is more effective than traditional learning in improving the knowledge, attitudes, skills and satisfaction of health workers.
Kyaw et al., (2019)	Virtual reality for health professions education: Systematic review and meta-analysis by the digital health education collaboration	Virtual Reality (VR) is a technology that allows users to explore and manipulate real or computer-generated three-dimensional multimedia sensory environments in real time to gain practical knowledge that can be used in clinical practice for healthcare professionals to enhance their knowledge, cognitive skills, attitudes, and their satisfaction.	A literature study approach that discusses Virtual Reality (VR) carried out in the education process for health professionals is collected from several articles published on MEDLINE (Ovid), Embase (Elsevier), Cochrane Central Register of Controlled Trials (CENTRAL; Wiley), PsycINFO (Ovid), ERIC (Ovid), CINAHL (Ebsco), Web of Science Core Collection, and clinical trial registries (ClinicalTrial.gov and WHO ICTRP) from 1990 to 2017.	VR enhances the knowledge and skills of healthcare professionals compared to traditional education or other types of digital education.

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Peneliti/ Tahun	Judul	Metode Pendekatan	Sampel Penelitian	Hasil
Lall et al., (2019)	Influences on the implementation of mobile learning for medical and nursing education: Qualitative systematic review by the digital health education collaboration	This study was conducted to synthesize findings from qualitative or mixed methods studies to provide insight into the factors that facilitate or hinder the implementation of mobile learning strategies in the medical and nursing education process.	A total of 1,946 citations were screened, resulting in 47 studies that were selected to serve as studies on the implementation of mobile learning used in medical and nursing education.	Mobile devices can enable interaction between students and educational materials, fellow students, and educators in the health professions.
Zaccheus Opeyemi et al., (2019)	Perception of Nursing Students Towards <i>Online Learning</i> : A case Study of Lautech Open and Distance Learning Centre, Ogbomoso, Oyo State, Nigeria	This study tries to explore the perceptions of nursing students at LODLC towards the online learning system using the e-learning platform.	A total of 3,214 nursing students at the LAUTECH Open Distance Learning Center who have successfully completed at least one semester of facilitation both online and face-to-face.	The results obtained in this study indicate that through online learning, nurses have the opportunity to continue their education to a higher level.

Source: research on collaboration in education and learning based on internet technology

The distance learning approach with the support of the internet network is also known as online learning, e-learning, digital learning or virtual learning, where the learning facilitates the dimension of transformation for collaboration online (Belawati, 2020). By employing Virtual Reality technology, the education process for health workers as reported by Kyaw et al., (2019) is able to improve the cognitive skills of health professionals as compared to traditional learning.

In addition, the Digital Problem Based Learning (PDBL) approach turned out to be more effective in increasing knowledge for 890 health workers compared to traditional learning (Car et al., 2019). The transformation of ICT used can be more flexible, as found by Lall et al., (2019), where mobile devices are used as learning media that allow interaction between learning materials and students, fellow students, and for health professional educators. However, the use of this media needs to be preceded by a strategic policy from educational institutions. Zaccheus Opeyemi et al., (2019), reported on the perceptions of 3,214 nursing students at the LAUTECH Open and Distance Learning Center (LODLC), Ogbomoso, Oyo State which stated that the use of e-learning

platforms made learning easier and did not have a significant effect toward the learning process as a whole.

3.2. Policy in Designing Collaboration Opportunities for Poltekkes Bandung to Collaborate Based on SWOT Analysis

Policies in the provision of education are part of public policy (Hastuti & Suhartono, 2018) and education policy is a core element of modern state sovereignty and autonomy (Weymann, 2018). In measuring the state and potential of an organization, it is necessary to have an evaluation related to any dimensions that can provide an overview of the strengths, weaknesses, opportunities and threats possessed by an organization. SWOT analysis is a strategic planning method used to evaluate strengths, weaknesses, opportunities and threats that occur in an organization's business, or evaluate the dimensions of an organization and its competitors. To perform a SWOT analysis, it is necessary to determine the organization's objectives in identifying the object to be analyzed. Strengths and weaknesses are grouped into internal factors, while opportunities and threats are identified as external factors (Hinton, 2012).

As one of the government-owned institutions, Poltekkes Bandung needs to collaborate to achieve institutional objectives. The collaboration strategy issued in this context is intended to improve the lecturer's ability to master digital educational media. This is very important because in distance learning, the use of learning platforms using digital media is very necessary. In addition, collaboration is also directed to overcome problems faced by PS D III Dental Health students who have limitations in achieving core competencies in participating in online distance learning.

Sururi (2016) states that the government's role in issuing policies is expected to be able to adapt and innovate in anticipation to various changes effectively, hence collaborative governance is a series of arrangements for one or more public institutions that are directly involved in the formal policy-making process (Ansell & Gash, 2008). On this basis, the policies issued to support the implementation of education as stated in Poltekkes Bandung's SWOT, is an effort to benchmark other institutions that have the capacity and experience in conducting distance learning, also an innovation to achieve the education objectives that has been set.

The table below shows the strengths, weaknesses, opportunities and threats of Poltekkes Bandung which can be used as a basis for issuing a policy for collaboration.

Along with the Covid 19 pandemic, distance learning has become a new approach in academia in order to plan, implement and develop collaborative health education

TABLE 2: Poltekkes Bandung SWOT.

Internal	Strategy	External
Strength		Opportunity
High institutional performance	Development of lecturers in the field of digital education media Organizing stakeholder health education and training and benchmark classes Development of a superior-oriented new student admission system	Interested students/suppliers are still high
		Benchmark Source by other colleges
Excellent graduate performance		Educational technology rapidly growing
Weaknesses	Strategy	Threat
Limited raw input	Strengthening IT equipment and educational applications Strengthening Human Resources through Serkom and CPD Development of PT . marketing system	Demand is starting to surfeit
IT technology support is not optimal		Other colleges as competitors
Human Resource performance is not optimal		BLU independence policy

(Poltekkes Bandung, 2020)

programs through organized communication (Burgess et al., 2016). Therefore, the collaboration that can be built by Poltekkes Bandung in overcoming learning challenges in PS D III Dental Health as an institution that provides vocational education is carried out to increase performance in the education system, increase attractiveness and meet the needs of the job market, empower teaching staff, expand educational reach, autonomy quality campuses, equitable access to education (Golden, et al.,2016).

Looking at some of the potential strengths possessed by Poltekkes Bandung as shown in table 2 above, the education management policy strategies are aimed to: 1) develop quality learning facilities that are supported by the use of information technology, 2) developing Poltekkes Bandung business through professionally managed collaborations, and 3) policies in the development of information technology to support service modernization through collaboration with universities (Poltekkes Bandung, 2020). In line with this, as more and more nursing professions complete their education through e-learning, they tend to be more responsive to technology (Zaccheus Opeyemi et al., 2019).

In addition, with the strengths and opportunities possessed by Poltekkes Bandung, strategies that can be taken to achieve the element of lecturer development in the field

of digital education media can be used as a basis for distance education collaboration which can be preceded by a benchmarking process to institutions that have consistently been providing distance education. Even this context is a collaboration strategy for the weakness of raw input at Poltekkes Bandung, where IT support is still not optimal.

Based on the above description, by referring to Poltekkes Bandung SWOT, collaboration opportunity schemes that can be carried out by Poltekkes Bandung in the context of collaborative governance to achieve core competencies of PS D III Dental Health students collaboration can be done with the Faculty of Dentistry as one of the a government-owned educational institution that has a similar learning process in clinical learning to achieve core competencies of PS D III Dental Health students. Apart from close proximity, collaboration with the UNPAD Bandung Faculty of Dentistry is beneficial because it has complete facilities to support clinical learning. Collaboration with the Universitas Terbuka can also be carried out in order to increase the knowledge and experience of PS D III Dental Health lecturers in providing online distance teaching. The selection of the Universitas Terbuka as the target of collaboration is because this educational institution has consistently conducted distance learning and is the only educational institution in Indonesia that provides online distance learning.

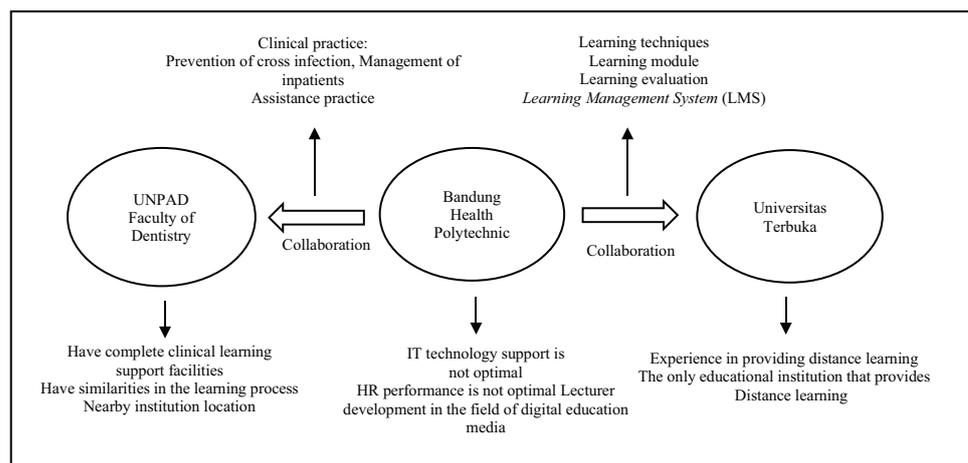


Figure 1: Collaborative Opportunity Scheme that can be done Based on the SWOT Analysis of Poltekkes Bandung to overcome Learning Problems in PS D III Dental Health.

The collaboration that must be built by Poltekkes Bandung, as in the illustration above, is aimed to overcome the existence of several contexts that need to be further analyzed in relation to the IT support still not being optimal, as well as human resources at Poltekkes Bandung in carrying out learning in PS D III Dental Health. Referring to Alrahlah (2016), the effectiveness of learning based on the ability to analyze problems in a dental health student teaching method will form superior professional skills and

effective learning compared to other methods (Lincoln & Kearney, 2015), and in practice Dental and Oral Therapists and Dentists are health teams that play a role in improving the overall dental and oral health of patients (McGregor et al., 2018).

Health practitioners and educators can collaborate to implement educational policy programs for the realization of public health (Hahn & Truman, 2015). The improvement of student competence in PS D III Dental Health can be formed by a collaborative process of interprofessional education in terms of clinical learning with the support of complete facilities owned by the Faculty of Dentistry UNPAD to support the skills of PS D III Dental Health students in the practice of preventing cross infection, patient management hospitalization, as well as the practical assistance. Furthermore, this collaboration is expected to increase students' ability to provide dental health service efforts in the context of realizing public health in general.

In order to overcome the problem of the ability of lecturers at PS D III Dental Health in providing online distance learning, Poltekkes Bandung needs to collaborate with the Universitas Terbuka educational institution because the institution is the only educational institution in Indonesia that consistently conducts remote learning. Lecturers of PS D III Dental Health can improve their ability to manage learning related to how to do technical learning, how to make learning modules, evaluate learning, and can also develop understanding in managing distance learning through the Learning Management System (LMS) approach.

4. Conclusion

According to the descriptions that have been described in the previous section in this study, the conclusions that the author can convey regarding collaborative solutions that can be carried out by Poltekkes Bandung to overcome learning problems in PS D III Dental Health are:

1. The policy to conduct online distance learning collaboration during the Covid-19 pandemic that can be carried out by Poltekkes Bandung is directed at achieving the core competencies of Dental Health PS D III students.
2. To achieve the core competency skills of PS D III Dental Health students, Poltekkes Bandung can collaborate through an interprofessional education approach with the UNPAD Faculty of Dentistry.

3. To shape lecturers who are trained in providing online distance learning, Poltekkes Bandung collaborates with the Universitas Terbuka as an educational institution that has consistently conducted distance learning education.

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