



Academic Internal Quality Audit **COMPUTER SCIENCE AND INFORMATICS EDUCATION**

Quality Assurance Center
Learning Development and Quality Assurance Institution

Universitas Pendidikan Ganesha

Executive Committee
October, 2021

PAGE OF LEGALIZATION
UNDIKSHA's Academics Internal Quality Audit Report In 2021

Title : "The Academics Internal Quality Audit Cluster Computer Science and Informatics Education in 2021"

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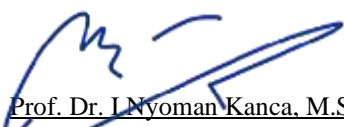
2. Period of Time : 6 months (May-October 2021)

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Education Study Programme Environment

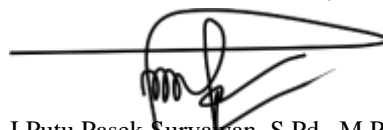
4. Total of Audit : 4 Study Program

5. Total of Auditor : 8 People

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PREFACE

Praise and gratitude to God Almighty, by His grace, the committee was able to carry out and report on the UNDIKSHA's Academics Internal Quality Audit activities for the 2021 Computer Science and Informatics Education Cluster as planned. The UNDIKSHA's Quality Assurance Center always tries to develop the concept of continuous quality improvement by implementing the Academics Internal Quality Audit for study programme within the scope of the Computer Science and Informatics Education Cluster in 2021.

In the implementation of the Academics Internal Quality Audit UNDIKSHA in 2021, there were no significant changes with the implementation in 2020 in terms of the mechanism. In the implementation of 2021, Quality Assurance Center re-create instrument itself, which refers to the Accreditation Instrument of 9 Criteria, i.e Key Performance Indicators, International Accreditation, and the demands for an Freedom to Learn-Independent Campus with a focus on the fields of Education, Research, Community Service, and several additional criteria, such as the vision and mission, governance arrangements, students, and Tridharma's outputs as a refinement of the Academics Internal Quality Audit UNDIKSHA instrument that created in 2020, as well as meeting the demands of different indicators/standards at each strata. In addition, for accommodating the Establishment, Implementation, Evaluation, Control and Improvement (EIECI)/*PPEPP* cycle from Internal Quality Assurance System on the Academics Internal Quality Audit UNDIKSHA instrument 2021, it also added a follow-up form review for study program that related to audit findings in the previous Academics Internal Quality UNDIKSHA in 2020. There are many indicators items that must be filled in the Academics Internal Quality UNDIKSHA Instruments 2021, especially those that filled for study programme in the Computer Science and Informatics Education Cluster, namely: Undergraduate Program (S1) with 80 points and Master Program (S2) with 75 points. This is intended to maintain and improve the readiness of study programme in the Computer Science and Informatics Education Cluster environment in facing accreditation with 9 criteria and being able to identify weaknesses from the start. In addition, the results of this Academics Internal Quality activity can be used as material by the Departments/Study Programme to make improvements to the performance that is still lacking. Meanwhile, the purpose of Academics Internal Quality results for Undiksha are used as material to provide guidance to the Departments / Study Programme in according to their respective performances.

In 2021, four of study programme in the Computer Science and Informatics Education Cluster at Undiksha filled out the Academics Internal Quality Audit Instruments 2021 and the study programme were visited to see the compatibility between the reality in the field and the standards that previously set. With limited space for movement in the midst of the COVID-19 pandemic, field visits were carried out via online. In the future, it is hoped that the involvement of study programme in participating in Academics Internal Quality Audit still as the same this and increase the quality. Through this opportunity, the author expresses his gratitude to all those who have helped the implementation of the Academics Internal Quality Audit 2021.

That's it all that we can report as a follow-up to the activities that have been carried out, hopefully it could be worthwhile.

Singaraja, October 2021

UNDIKSHA's Quality Assurance
Center Team

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CHAPTER 1

INTRODUCTION

1.1 Background

Internal Quality Audit is a systematic, independent, and documented testing process to ensure that the implementation of activities in higher education is appropriate with procedures and the results are relate with standards to achieve institutional goals. Thus, Internal quality audit is not an assessment, except for a match between the implementation and the planning of an activity or program. Internal Quality Audit is one of the requirements that must be met by universities as a form of self-evaluation reflection carried out by the institution itself. This internal quality audit is intended to review the level of conformity and effectiveness of the implementation of the Internal Quality Assurance System (SPMI) that has been established and becomes the basis for the strategic direction and quality objectives to be achieved and writteb in the Internal Quality Assurance System Quality Document. The position of Internal Quality Audit in the SPMI cycle can be illustrated as shown in Figure 1.1 below.



Figure 1. 1 Internal Quality Audit on SPMI cycle

(Source: Directorate of Quality Assurance, Belmawa 2018)

Audit Mutu Internal: Internal Quality Audit

SPMI: Internal Quality Assurance System

PPEPP: Establishment, Implementation, Evaluation, Control and Improvement

PDCA: Plan, Do, Check, Act

PDRI: Project Definition Rating Index

The figure 1 above, means that Internal Quality Audit in the SPMI cycle (now known as Establishment, Implementation, Evaluation, Control and Improvement/(EIECI)/*PPEPP*) is a very important part to be conducted in periodic in the terms for evaluating implementation that had been established, so that the controlling and increasing standart continusly happened. UNDIKSHA as university that prioritize guarantee of quality also execute Internal Quality Audit periodically in every year. Head of UNDIKSHA ensure the establishment of Internal Quality Audit progress in effectively and efficient for accessing the power and weakness of SPMI.

In addition, one of the SPMI implementation target activity in UNDIKSHA is going for make realization of study programme accreditation to be better. The study programme accreditation is an evaluation and assessment process in comprehensively above the commitment of study programme toward the quality and capacity program enforcement of University/ higher education Tridharma. Therefore, to support the implemetation of quality assurance system that appropriate with that expectations is need to do the work performance assessment, especially in the Unit Academics Work (study programme) through the Academics Internal Quality Audit. Academics Internal Quality Audit in Ganesha University of Education (UNDIKSHA) especially in study programme scope that incorporated in Cluster Computer Science and Informatics Education, which implemented by UNDIKSHA's Quality Assurance Center. Quality Assurance Center implements Academic Internal Quality Audit gradually and systematic. Academics Internal Quality Audit done with intend to evaluate the study programme performane which exists in UNDIKSHA's environment.

The implementation of Internal Quality Audit in general is explained in the below, as follow.

- 1) The first Academics Internal Quality Audit in UNDIKSHA was held in 2010. In that period, Academics Internal Quality Audit was implemented toward an element of Higher Education Tridharma (Tridharma is Indonesian University duty and responsibility, which consisted of three elements, being educated and educating, researching and developing, and doing community engangement and services), that is only learning/education which involved by 24 Departments in UNDIKSHA. This year, Informatics Engineering Education is the only study programme (we called study programme a Department) that joined Internal Quality Audit because the other three study programs in Cluster Computer Science and Informatics Education had not been established yet.

- 2) In 2011, the Academics Internal Quality Audit was held toward three higher education Tridharma's elements, and departments/study programme that participated were 31, which are from 6 faculties and 6 Post-graduate study programme, and also included Bachelor Programme in Informatics Engineering Education.
- 3) In 2012, the Academics Internal Quality Audit was held toward three elements of higher education Tridharma's with the amount 31 that participated, which are 6 faculties and 4 Post-graduate study programme, and also included Bachelor Programme in Informatics Engineering Education.
- 4) Next, in Academics Internal Quality Audit, the fourth implementation in 2013, Units of Quality Assurance (now it is known as Quality Assurance Center) also implemented Academics Internal Quality Audit toward three elements of higher education Tridharma, such as learning (education), researching, and community services as well as managed Department/study programme.
- 5) In the implementation of the Academics Internal Quality Audit in 2014, there were 32 department/study programmes participated in the design and mechanism, which are similar to the previous one, including Bachelor Programme in Informatics Engineering Education.
- 6) In the implementation of the Academics Internal Quality Audit in 2015, the number of study programmes that participated was 34 from 54 study programmes in UNDIKSHA, including Bachelor Programme in Informatics Engineering Education, with design and mechanism that also as the same within the previous one. This year, the Master Programme of Computer Science started to participate in Academics Internal Quality Audit.
- 7) In the implementation of the Academics Internal Quality Audit in 2016, the amounts of study programmes that involved in were 41 study programme in UNDIKSHA, included Bachelor Programme in Informatics Engineering Education and Master Programme of Computer Science. In the implementation in 2016, Quality Assurance Office (now it is known as Quality Assurance Center) already fully adopted National Accreditation Board for Higher Education standard as an audit instrument.
- 8) In the implementation audit in 2017, the amounts of study programme that participated were 41 study programmes in UNDIKSHA, including Bachelor Programme in Informatics Engineering Education and Master Programme of Computer Science. In the implementation, Quality Assurance Office (now it is known as Quality Assurance Center) still fully adopted National Accreditation Board for Higher Education standard

as audit instrument.

- 9) In the implementation audit in 2018, the amounts of study programmes that participated 45 study programmes in UNDIKSHA, including Bachelor Programme in Informatics Engineering Education and Master Programme of Computer Science. In the implementation in 2018, Quality Assurance Office (now it is known as Quality Assurance Center) still fully adopted National Accreditation Board for Higher Education standard as audit instrument..
- 10) In the implementation in 2019, the amount of study programmes that participated was 56 from 63 study programmes in UNDIKSHA, including Bachelor Programme in Informatics Engineering Education and Master Programme of Computer Science. However, the instrument that was used different within the previous years. This year, the Bachelor Programme in Informatics Engineering Education and Bachelor programme Information System participated in the first Internal Quality Audit since founded in 2018.
- 11) In the implementation in 2020, the amount of study programme that participated was 63 from 63 study programme in UNDIKSHA, included four of the study programme in Cluster Computer Science and Informatics Education (the participation level of study programme is 100%). Yet, the instrument that was used was different from previous years, which accommodates 9 criterion accreditation.
- 12) In the implementation of 2021, the amount of study programme that participated was 65 from 65 study programme in UNDIKSHA including four of study programme in Cluster Computer Science and Informatics Education (the participation level of study programme is 100%). Yet, the instrument that used was slightly different from previous years. Despite for accomodating 9 criteria accreditation also refers to the Key Performance Indicators, International Accreditation, Freedom to Learn-Independent Campus, and emphasized Establishment, Implementation, Evaluation, Control, and Improvement (EIECI) in Internal Quality Assurance System.

In the implementation, Academics Internal Quality Audit for a study programme in the scope of Cluster Computer Science and Informatics Education in 2021 did not happen the significant change compared within in the implementation in 2020 from the mechanism side. In the implementation in 2021, Quality Assurance Center recreate again the instrument that refers to the accreditation 9 criteria instrumen by adding the demands from Key Performance Indicators, International Accreditation, and Freedom to Learn-Independent Campus, which focused at education field, research, and community services

and several additional criteria, such as vision mission, governance, students, and Tridharma's output as the refinement of Academics Internal Quality Audit UNDIKSHA in 2020. Also, the fulfilment of indicators/standard demands that differ in each stratum. In addition, the fundamental distinction within previous instrument is added with follow-up form review audit findings in Academics Internal Quality Audit in previously to emphasize the Establishment, Implementation, Evaluation, Control and Improvement (EIECI) in Internal Quality Assurance System. Cluster Computer Science and Informatics Education is consisted of 4 study programme, 1 study programme from Master Programme/Postgraduate, and 3 study programme from Bachelor Programme. Those study programme that incorporated, such as, Master programme computer science, Bachelor programme computer science, Bachelor programme Information System, and Bachelor programme Informatics Engineering Education. Many of Indicators item that needed to fill by study programme in the Academic Internal Quality Audit instrument, especially at Cluster Computer Science and Informatics Education in 2021, namely: there are 80 items for Bachelor programme, and 75 items for Master programme. This is intended for maintaining and increasing the study programme readiness in UNDIKSHA environment especially in Cluster Computer Science and Informatics Education is facing the accreditation with 9 criteria, by accommodating the government policies development to be could understand the weakness early. Furthermore, the Academic Internal Quality Audit results could be used as the material to recover toward the work performance that still less by department/study programme. As the same within the previous Academics Internal Quality Audit, the Internal quality audit in 2021 is also started by the recruitment of auditor candidate, training for auditor candidate, auditor appointment, the audit execution and reporting. The recruitment and auditor candidate is held earlier in this year rather than last years by optimizing the internal respondent that competent in Internal Quality Assurance System and Internal Quality Audit. The execution of auditor training and visiting to the each study programme that in the first would conducted via offline, changed through via online, because the COVID-19 pandemic condition that still continusly happen and tend to increase in Buleleng Regency.

The systematical evaluation, comprehensively and sustainable, department/study programme would get their portrait, either the weaknesses and superiority that have, then, the performance is recovered, so that, it has the better readiness in accreditation. In addition, this evaluation also in the form of application in contious quality improvement

could be created as the handle in giving the academic service that is better and professional.

1.2 The Implementation Legal Basics/References of Academics Internal Quality Audit

The academics internal quality audit is an activity that ensure the quality to be implemented internally in the University/higher education that involved. This is carrying out to prevent the distortion toward the standart achievement that already established. Several standart consideration implementation of academics internal quality audit, as follows.

- 1) Law no. 20 of 2003 concerning the National Education System.
- 2) Government Regulation No. 19 of 2005 concerning National Education Standards.
- 3) Minister of National Education Regulations No. 63 of 2009 concerning Education Quality Assurance System.
- 4) Law no. 12 of 2012 concerning Higher Education.
- 5) Minister of Education and Culture Regulations No. 49 of 2014 concerning National Standards for Higher Education.
- 6) Minister of Research and Technology Regulations No. 44 of 2015 concerning National Standards for Higher Education.
- 7) Minister of Research and Technology Regulations No. 32 of 2016 concerning Accreditation of Departments/Prodi.
- 8) Minister of Research and Technology Regulations No. 62 of 2016 concerning the Education Quality Assurance System.
- 9) National Accreditation Board for Higher Education Regulation Number 59 of 2018 concerning Guidelines for Compiling Self-Evaluation Reports and Guidelines for Compiling Higher Education Performance Reports.
- 10) Minister of Education and Culture Regulations 3 of 2020 concerning National Standards for Higher Education.
- 11) Minister of Education and Culture Regulations No. 5 of 2020 concerning Accreditation of Study Programs and Universities.

12)Minister of Education and Culture Regulations 03 of 2020 concerning National Standards for Higher Education and Decree of the Minister of Education and Culture of the Republic of Indonesia Number 3/M/2021 concerning Main Performance Indicators of State Universities (IKU-PTN).

13)Decree of the Minister of Education and Culture Number 83/P/2020 concerning International Accreditation Agencies.

1.3 Activity Objective

The Academics Internal Quality Audit to Cluster Computer Science and Informatics Education was aimed for, as follows.

- 1) Ensure whether the findings/corrective action plans in the previous year's audit cycle have been followed up by the study programme.
- 2) Ensure the appropriate direction and implementation of quality assurance study programme toward the academics document University/faculty/ study programme and quality document University/faculty/ study programme.

1.4 Activity Benefits

The results that expected from the Academics Internal Quality Audit UNDIKSHA for Cluster Computer Science and Informatics Education in 2021 is being a part of responsibility departement/study programme to the public about their performance. Moreover, the Academics Internal Quality Audit would give the feedbacks to the departement/study programme about the performance, so that, departement/study programme could formulated programs to improve its quality. If the activity could be implemented continusly from the EIECI cycle, which are establishment, implementation, evaluation, control and improvement, the continous improement concept would get realization to all of departement/study programme in UNDIKSHA in the Cluster Computer Science and Informatics Education.

Furthermore, in specifically the benefits that gained in Academics Internal Quality Audit UNDIKSHA for Cluster Computer Science and Informatics Education in 2021, as follows.

- 1) Obtained recommendation the quality improvement study programme Computer Science and Informatics Education for all the head in developing various programme to achieve institution target.

- 2) The step to know the appropriate standart withi the implementation that already conducted in various aspects that established in Academics Internal Quality Audit UNDIKSHA in 2021 (Education, Researching, Community Services, and additional others standart), i.e:
- a) consistency of curriculum and syllabus elaboration with educational goals and expected graduate competencies;
 - b) compliance with the planning, implementation, and evaluation of the learning process on the study program manuals, procedures, and work instructions;
 - c) the adequacy of the provision of infrastructure, learning resources, research, and community service; and
 - d) reduce the risks that may occur to UNDIKSHA, especially for study programs in the Computer Science and Informatics Education Cluster, such as: quality, legal, financial, strategic, compliance, operational risks, and especially reputational risks.

CHAPTER II

ACTIVITY IMPLEMENTATION

2.1 Activity Mechanism

The stages of Academic Internal Quality Audit UNDIKSHA that were implemented for Cluster Computer Science and Informatics Education in 2021 did not have a significant difference from the implementation stages of Academic Internal Quality Audit in 2020. Those stages involve: (1) Prepare the filling form and audit instrument, (2) Delivery filling form and instrument that would be used for each study programme, (3) Recruitment and training of auditor candidate, (4) Assigned auditor to do the audit, (5) Audit implementation, (6) Reporting the audit results, (7) Management review meeting, and (8) Reporting the management review meeting. To support the activity to be properly, Quality Assurance Center formed the committee executive of Academics Internal Quality Audit UNDIKSHA in 2021 through the Decree of the Chancellor of UNDIKSHA number: 1556/UN48/PJ/2021, and the committee fully responsible in the implementation of Academics Internal Quality Audit UNDIKSHA in 2021, especially in Cluster Computer Science and Informatics Education study programme until get the audit finding report. The structure of Academics Internal Quality Audit UNDIKSHA in 2021 that involved is **attached**.

2.2 Auditor who Involved

By emphasizing the auditor's work to be effective and efficient, the reflection of Academics Internal Quality Audit in previously, on Academics Internal Quality Audit UNDIKSHA in 2021 recruited for 60 auditors that seen having commitment and high integrity in increasing institution quality. Those 60 auditors are from the Academics Internal Quality Audit UNDIKSHA in 2020 and the representative of Quality Control Division in each faculty/postgraduate. One auditor team were consisted of 2 people by composition one as leader and the others as the member of auditor. By seeking the composition amount of auditor and auditee, every group could be audited with 2 or 3 auditee. Specifically, the implementation of Academics Internal Quality Audit Cluster Computer Science and Informatics Education was conducted by two auditors for each study programme in Cluster Computer Science and Informatics Education. The entire auditor involved was eight people.

Each auditor that proposed must be filled out a letter of willingness as a prospective auditor. The letter of willingness contains the auditor's commitment to take part in the full

refresher and/or training of prospective auditors, and to carry out the audit in earnest. That intended could run the audit implementation well and following the established plan, especially the Academics Internal Quality Audit 2021 instrument uses a new instrument and is significantly different from the previous instrument.

Refreshing activity and/or this training is given by the internal instructor that already joined the Internal Quality Assurance System, Internal Quality Audit, and Training and trainers (TOT) workshop. The Internal Quality Assurance System (SPMI) trainers are carried out by the Directorate of Quality Assurance, where UNDIKSHA has 4 certified trainers. Auditor training materials include: (1) SPMI and External Quality Assurance System (SPME) concepts, (2) Internal Quality Audit basic concepts; (3) Audit principles and ethics; (4) Explanation of instrument items and reporting of Academics Internal Quality Audit UNDIKSHA findings in 2021; and (5) Simulation of filling out instruments and calculating audit results using the Academics Internal Quality Audit UNDIKSHA instrument in 2021. For carrying out this simulation activity, the committee provides simulation material in the form of simulation data for instrument entries from several existing study programme. At the end of this simulation session, participants were asked to present the results of their respective assessments. The other participants were asked to provide feedback on the results of the assessment. In this way, it is hoped that all participants will be able to fill out the assessment form that has been prepared. For knowing the understanding of the training participants, at the beginning and at the end of the activity a pretest and posttest were given. In 2021, as many as 60 auditors have passed the training and are entitled to become auditors for the Academics Internal Quality Audit UNDIKSHA in 2021 and 8 of them will become the auditors for the Academics Internal Quality Audit for the Cluster Computer Science and Informatics Education in 2021.

Before carrying out the assignment, the auditor was given letter of assignment from Rector's Decree number: 2237/UN48/PJ/2021 which includes auditees (study programme) who are tasked with carrying out audits. The assignment of this auditor is based on the principle of independence, means that an auditor from one department/study programme in a certain faculty will audit other faculties, and not at the department in their own faculty. The following distribution list for the tasks of auditor in Academics Internal Quality Audit UNDIKSHA in 2021 for Computer Science and Informatics Education Cluster is as shown in Table 2.1 below.

Table 2. 1 Distribution of the Auditor Assignment in Academics Internal Quality Audit
UNDIKSHA 2021

No.	Auditor Name	Position	Auditee
1.	Dr. Made Agus Dharmadi, S.Pd., M.Pd.	Leader	Master Programme of Computer Science
	Dr. Luh Putu Tuti Ariani, S.Pd., M.Fis.	Member	
2.	I Made Suarsana, S.Pd., M.Si.	Leader	Bachelor Programme of Computer Science
	I Nyoman Budayana, S.Pd., M.Sc.	Member	
3.	I Putu Pasek Suryawan, S.Pd., M.Pd.	Leader	Bachelor Programme of Information System
	Ni Luh Putu Ananda Saraswati, S.Si., M.Si.	Member	
4.	Dr. I Made Citra Wibawa, S.Pd., M.Pd.	Leader	Bachelor Programme of Informatics Engineering Education
	Ni Made Dwi Ariani Mayasari, SE., MM.	Member	

2.3 The Auditee that Involved

Auditee or audited is the bachelor and master programme in the scope of Cluster Computer Science and Informatics Education. For Academics Internal Quality Audit in Cluster Computer Science and Informatics Education in 2021 were 8 auditee that already established by Quality Assurance Center to be audited. Thus, referring the Academics Internal Quality Audit in the previous years, for about 5 years time span, the participation in Academics Internal Quality Audit in Cluster Computer Science and Informatics Education is mentioned in Table 2.2 Knowing that the Bachelor Programme of Computer Science and Bachelor Programme of Informatics System were not joined the audit in 2018. This causes both of study programme not to be able to participate in the audit.

Table 2. 2 Study Programme Participation in the Computer Science and Informatics Education Cluster from 2017-2021

No.	Study Programme	The Participation of Academics Internal Quality Audit				
		2017	2018	2019	2020	2021
1.	Master Programme of Computer Science	Yes	Yes	Yes	Yes	Yes
2.	Bachelor Programme of Computer Science	*	No	Yes	Yes	Yes
3.	Bachelor Programme of Information System	*	No	Yes	Yes	Yes
4.	Bachelor Programme of Informatics Engineering Education	Yes	Yes	Yes	Yes	Yes

*In that year, the study programme had not established yet

2.4 Audit Instrument

The implementation of Academics Internal Quality Audit UNDIKSHA for Cluster Computer Science and Informatics Education in 2021, Quality Assurance Center recreates again the instrument itself that refers to the 9 criteria instrument accreditation, Key

Performance Indicators, the policy of Freedom to Learn-Independent Campus, and international accreditation with focused at Education, Research, Community Services field and several additional standard, such as vision and mission, Governance, Students, and Outcomes of Tridharma as the refinement of Academic Internal Quality Audit UNDIKSHA 2020, as well as the fulfillment demands of indicator/standard that differ in each stratum. This is intended to maintain and increase study programme readiness in the scope of UNDIKSHA, mainly the study programme that existed at Cluster Computer Science and Informatics Education in facing the accreditation with 9 criteria and could be viewed the weakness early. The number of indicator items that must fill out in by study programme in the Academics Internal Quality Audit UNDIKSHA 2021 Instrument, which is used as the Academics Internal Quality Audit instrument for the 2021 Cluster Computer Science and Informatics Education is mentioned in Table 2.3 below.

Table 2. 3 The Number of Indicators Item Instrument of Academics Internal Quality Audit UNDIKSHA 2021

No	Study Programme Degree	Amounts of Indicators in Each Audit Scope				Indicators total
		Education	Research	Community Services	Additional	
1.	Diploma (D3)	23	5	4	35	67
2.	Bachelor (S1)	24	6	4	46	80*
3.	Master (S2)	24	6	4	41	75*
4.	Professor (S3)	24	6	4	41	75

* the number of instrument indicator items used at the Academics Internal Quality Audit UNDIKSHA for the Computer Science and Informatics Education Cluster in 2021

The indicators/standards contained in the Academics Internal Quality Audit UNDIKSHA 2021 instrument for each strata (D3, S1, S2, and S3) are **attached**. Meanwhile, the appearance of the instruments that must be filled out by the study programme in briefly can be described as Table 2.4 below.

Table 2. 4 Appearance of Academics Internal Quality Audit UNDIKSHA 2021 instrument

Code	Indicators	Study Programme Condition		Study Programme Condition	Supporting Document
		Yes	No		
A.	EDUCATION AND TEACHING				
B.	RESEARCH				

C.	COMMUNITY SERVICES				
K.	Additional Criteria				
	K.1. Vision and Mission				
	K.2. Guidance				
	K.3. Students				
	K.9. Tridharma Outcomes				

Besides that instrument, auditor also need the checklist to register the question that possible to ask in the study programme when the field visiting. Filling out checklist is based on instrument that already filled out by study programme and made when desk evaluation. Next, for describing the audit results that used the audit report form which generally decipher the audit finding that consist of two things, such as (1) inappropriarity (*KTS* or *OB*), and (2) improvement suggestions to achieve the standart that already established. The checklist format and audit report is **attached**.

To accommodate Establishment, Implementation, Evaluation, Control And Improvement (EIECI) cycle at Academics Internal Quality Audit UNDIKSHA 2021 also enforced the additional instrument to see the study programme follow-up regarding to the previous Academics Internal Quality Audit UNDIKSHA in 2020. This information collection was carried out before the Academics Internal Quality Audit UNDIKSHA 2021 instrument audit. The instruments are as shown in Table 2.5 below.

Table 2.5 Follow-up Instrument in the previous Academics Internal Quality Audit findings

[illegible]

Status AMI 2020: The Academics Internal Quality Audit Status in 2020

KTS: Innappropriate

OB: Observation

Capaian: achievement

Peningkatan: Improving (Yes/No)

UPPS: Study Programme Management Division

Prodi: Study Programme

2.5 Data Checking/Collection Method

The checking activity is started by checking the self-evaluation study programme that put into the Academics Internal Quality Audit UNDIKSHA in 2021 that already filled out by study programme (desk evaluation) before the visitation was carried out in the time that already agreed. Desk evaluation activity is conducted by auditor team with filled out the checklist for each study programme. Before the audit verification carried out, auditor team conducted the audiency as the first visitation within either study programme coordinator and others lecturer staff that attended in visitation. Next, document checking and field review was carried out. It aimed to verify the information that has been affixed by the audited in the contents of the self-evaluation instrument. The data and information obtained are analyzed. Then, until the findings are obtained, whether they are classified as KTS (inappropriate) or OB (observation). The discussion was carried out at the end of the visitation to obtain responses and follow-up commitments from the audited/auditee. The visitation implementation to each study programme, originally planned to be carried out offline, was replaced by an online implementation, considering the ongoing and increasing condition of the COVID-19 pandemic in Buleleng Regency (classified as the Red Zone). The Standard Operating Procedures (SOP) for the Academics Internal Quality Audit UNDIKSHA are **attached**.

2.6 Schedule of Academics Internal Quality Audit UNDIKSHA 2021

The Academics Internal Quality Audit for Cluster Computer Science and Informatics Education in 2021 was carried out related with the schedule of Academics Internal Quality Audit UNDIKSHA 2021. The schedule design was shown at Table 2.6 below. However, several stages of implementation were made by taking into account some of the obstacles faced as a result of limited space for movement and communication in the midst of the COVID-19 pandemic. In general, the Academics Internal Quality Audit 2021 implementation schedule is as follows.

Table 2. 6 The Schedule of Academics Internal Quality Audit in 2021

No.	Description of Activity	Time	PIC
1.	The forming of Academics Internal Quality	Thursday/ 6 July 2021	Leader and Secretary of Quality Assurance Center
2.	Coordination Meeting I: Concept and Mechanism Internal Quality Audit UNDIKSHA 2021 via online.	Wednesday/ 13 Juli 2021	Academics Internal Quality Audit Commitee

No.	Description of Activity	Time	PIC
3.	Compilation/Completion Instrument Academics Internal Quality Audit UNDIKSHA 2021	14 July-23 July 2021	Instrument Refinement Section
4.	The Academics Internal Quality Audit UNDIKSHA Auditor Recruitment in 2021	19 May-23 July 2021	Auditor Refresher Section
5.	Coordination Meeting II: Discussion and determination of the Academics Internal Quality Audit Instrument via online.	Monday/ 26 July 2021	Academics Internal Quality Audit Committee
6.	Auditor Training/Refreshment Academics Internal Quality Audit via online.	16-20 August 2021	Auditor Refresher Section
7.	Submission of information to study programme/department/faculty that related to the implementation of the Academics Internal Quality Audit and Academics Internal Quality Audit UNDIKSHA 2021 requests for sending the Instrument Fields.	Friday/ 30 July 2021	Leader and Secretary of Academics Internal Quality Audit that helped by staff employee
8.	The deadline for collecting/submitting the Academics Internal Quality Audit UNDIKSHA 2021 Instrument Fields by study programme to Quality Assurance Center, is via online.	Monday/ 30 August 2021	Staff employee Quality Assurance Center
9.	Division and submission of auditees to the audit team.	31 August-4 September 2021	Leader dan Secretary Academics Internal Quality Audit
10.	<i>Desk evaluation of the Academics Internal Quality Audit UNDIKSHA 2021 Field by auditors.</i>	6 -18 September 2021	<i>Desk Evaluation</i> Section
11.	Visitation to Study Programme (auditee) by the auditor.	20 September s.d. 1 October 2021	Visitation Section
12.	The deadline for submitting audit results by the auditor to the Academics Internal Quality Audit UNDIKSHA 2021 Committee in the form of an Audit Report.	Friday/ 8 October 2021	Auditor and Employee Staff
13.	Preparation of the Academics Internal Quality Audit UNDIKSHA 2021 Report as a whole by the Committee.	11-22 October 2021	Leader and Secretary of Academics Internal Quality Audit Staff
14.	Coordination Meeting III (Plenary Audit Results): The Academics Internal Quality Audit UNDIKSHA 2021 Committee submits the Audit Result Report to Quality Assurance Center and Learning Development and Quality Assurance Institute	Monday/ 25 October 2021	Academics Internal Quality Audit Staff
15.	Publication/submission of Audit Reports to Faculties/Departments/Study Programme and leaders.	27-29 October 2021	Leader and Secretary of Academics Internal Quality Audit Staff
16.	Management Review Meeting Academics Internal Quality Audit UNDIKSHA 2021	Tuesday/ 4 November 2021	Management UNDIKSHA
17.	Compilation of Student Assignment Plan Academics Internal Quality Audit UNDIKSHA 2021	5-22 November 2021	Leader and Secretary of Academics Internal Quality Audit Staff
18.	Submission of the 2021 Academics Internal Quality Audit Management Review Meeting Report to Undiksha Management	22-30 November 2021	Employee Staff

2.7 Audit Scope

The Academics Internal Quality Audit UNDIKSHA document that carried out for the Cluster Computer Science and Informatics Education 2021 is in the form of a study programme self-evaluation report that fills in information according to the Academics Internal Quality Audit UNDIKSHA instrument 2021 with data for the last 1 (one) year, namely the 2020/2021 academic year data and fiscal year (budget) 2021. **The audited areas focus on (1) Education, (2) Research, and (3) Community Service, and (4) Additional Standards** (Vision and Mission, Governance, Students, and Tridharma Outcomes) which refers to the Assessment **Matrix of the Accreditation Study Program Self-Evaluation Report 9 Criteria, Key Performance Indicators, Freedom to Learn-Independent Campus, and International Accreditation.**

CHAPTER III

AUDIT FINDING

As explained in the previous part, that the implementation of Academics Internal Quality Audit UNDIKSHA in 2021 is significantly different from instrument audit aspect. Despite to refine its standarts that refers to the Accreditation Indicator 9 Criteria, key performance indicators, international accreditation, and Freedom to Learn-Independent Campus, and the others different things is audit that started by the auditee (study programme) review related to the audit finding that already auditor recorded in the previous Academics Internal Quality Audit UNDIKSHA in 2020. Thus, the Internal Quality Audit explanation is distinguished into two, such as (1) **audit review finding in Academics Internal Quality Audit in Cluster Computer Science and Informatics Education 2020**; and (2) **the finding in Academics Internal Quality Audit in Cluster Computer Science and Informatics Education 2021**, as follow.

3.1. The Results of Audit Review Finding in Academics Internal Quality UNDIKSHA 2020 in Cluster Computer Science and Informatics Education

The most basic difference to the previous instrument is adding by form review in audit findings in the previous Academics Internal Quality Audit UNDIKSHA, which is for enhancing the Establishment, Implementation, Evaluation, Control and Improvement (EIECI)/PPEPP cycle in Internal Quality Assurance System. According to the Academics Internal Quality Audit UNDIKSHA in 2020, there were 4 auditee (study programme) for Cluster Computer Science and Informatics Education and gaining from audit finding, which classified as inappropriate (*KTS*) and/or OB (observation) for all the auditee. The findings were different in each others study programme, and there were several finding, which is dominant to appear for each study programme in getting special policy from institution leader to prevents. In addition, in the 2020 Management Review Meeting has been generated and a solution to the problem root that found has been agreed upon to be followed up by each unit in UNDIKSHA, especially the study programme in the Computer Science and Informatics Education Cluster. After a year running, during the Academic Internal Quality Audit UNDIKSHA in 2021, a review or monev (monitoring and evaluation) is carried out related to the follow-up to audit findings that were found in previously by seeing whether there has been an increase or not. And when it has increased whether it is appropriate with the standards that set or not.

The distribution of audit findings (classified as *KTS* and OB) at the Academics Internal Quality Audit UNDIKSHA in 2020 and the number of these findings that have

increased (regardless of whether they have reached the standard or not) in 2021 for each stratum are presented in Table 3.1 below.

Table 3. 1 The distribution of Audit Finding in 2020 and Follow-up Review Finding in 2021 for Study Programme in Cluster Computer Science and Informatics Education

No	Study Programme Name	Audit Finding Total 2020	Follow-up Review in 2021	
			Increase	Not Increase
1.	Master Programme in Compter Science	3	1	2
2.	Bachelor Programme in Computer Science	10	4	6
3.	Bachelor Programme in Information System	14	10	4
4.	Bachelor Programme in Informatics Education	1	0	1

According to Table 3.1 above, it concluded that the percentage of audit finding amount that already followed up by study programme in Cluster Computer Science and Informatics Education and experience the increasing in 2021 could be described in the Figure 3.1, as follows.

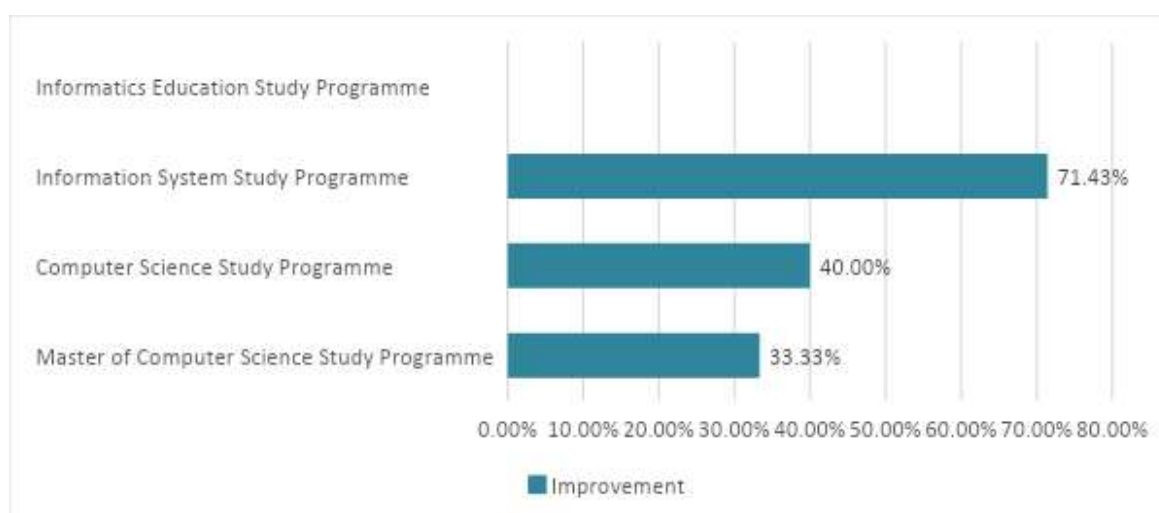


Figure 3. 1 The Percentage of Standart Achievement Increasing for Study Programme in Cluster Computer Science and Informatics Education

For more detail the review followed up results the Academics Internal Quality Audit in 2020 in study programme of Cluster Computer Science and Informatics Education of each study programme could be observed in the audit report in each study programme is **attached**. Further, referring to the auditor team further review and analysis

result, the following standards that became the findings in 2020 that have received follow-up and have increased the achievement of standards in 2021, as follows.

- 1) The courses in the four study programs are equipped with Learning Tools (Syllabus, Semester Course Contract, student assignment plan, and Lecture Contracts). This is a result of the mandatory policy of uploading learning tools at SIAK (Academic Information System) UNDIKSHA before uploading scores.
- 2) Monev (monitoring and evaluation) of the learning process has begun to be carried out regularly and systematically by an independent unit. Each faculty/postgraduate empowers the faculty/postgraduate Quality Control Division.
- 3) Courses that utilize the results of DTPS research/ Student creativity Programme in the implementation of learning have begun to increase. The utilization can be in the form of teaching materials, learning media, citation of research results, and other forms of integration. (DTPS is permanent lecturers who are assigned to teach courses in accordance with the competencies in the accredited study programme)
- 4) The involvement of students in research/community services activity lecturers is sufficient. This is a result of the obligation to include students in DIPA research.
- 5) The publication of articles and IPR research results/community services activity lecturers has increased. This can be achieved because there is special assistance or reward for this in remuneration.
- 6) Quality assurance carried out by the Quality Control Division for each faculty/postgraduate has started to be optimal. Through Quality Control Division-Faculty/Postgraduate, each faculty already has quality documents and make serious effort to implement the cycle EIECI from Internal Quality Assurance System.
- 7) Tracer studies carried out by the institute are more integrated with study programme, because in the process it involves study programme directly.
- 8) Study programme that have foreign students have started to increase. The institution through the special job fair is actively collaborating with foreign universities on international student exchanges.
- 9) Achievement of academic and non-academic students at the international level has increased from the previous year. Institutions through student affairs are aggressively encouraging and fostering students through the *Gebrak Prestasi* program at the institutional, faculty, and departmental level.

Further, several standards that dominant become the finding in 2020 that already had followed up. Yet, it still not have the standart achievement increasing and/or that have not received follow-up in 2021.

- 1) The study programme does not yet have a policy for additional requirements for student graduation in the form of an obligation to achieve a TOEFL score. The condition of the study programme awaits policy at the institutional level.
- 2) There is no policy in the study programme regarding the regular fulfillment of TOEFL for DTPS.
- 3) DTPS with Doctoral degrees have fewer amounts, especially in the S1 Computer Science, S1 Information Systems, and S1 Informatics Engineering Education study programs.
- 4) DTPS in Bachelor Programme of Computer Science, Bachelor Programme of Information Systems, and Bachelor Programme of Informatics Engineering Education study programs that have the functional position of Professor/Head Lecturer have not met the ideal proportions.
- 5) Master programme of Computer Science and Bachelor programme of Information Systems Study Programs do not yet have a Research Roadmap and Student Creativity Programme/Community Services.
- 6) In general, study programme do not have a strategic plan, which is only up to the strategic plan of the faculty.
- 7) The number of research outputs/student creativity programme students who have IPR, appropriate technology or books with ISBN is still low.

3.2. The Results of Academics Internal Quality Audit in 2021 in Cluster Computer Science and Informatics Education

As described in the previous section, the performance audit of the Bachelor Programme and Master Programme in the Cluster Computer Science and Informatics Education environment in 2021 is based on meeting the demands of different indicators/standards at each stratum. The Academics Internal Quality Audit UNDIKSHA 2021 instrument is used as a benchmark in evaluating and assessing the quality of performance, circumstances, learning, research, community service, and other additional criteria for study programme within Undiksha in the 2020/2021 academic year and the 2021 fiscal year. Based on the results the audit that has been carried out, in which obtained more detailed results as follows.

3.2.1 Audit Indicator Fullfilment in Each Study Programme

From the audit instrument indicator/standard that used in Academic Internal Quality Audit UNDIKSHA in 2021, in the following Figure 3.2 that shown the percentage fulfillment of indicator by every study programme in the scope of Cluster Computer Science and Informatics Education in 2021.

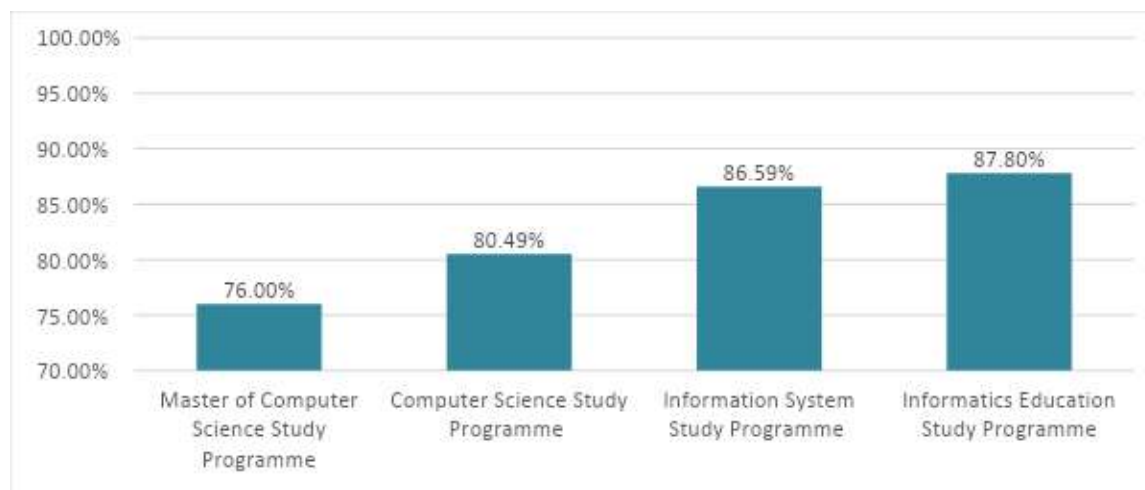


Figure 3. 2 The Standard Fullfilment of Academics Internal Quality Audit 2021 for Cluster Computer Science and Informatics Education

According to the above descriptions, it concluded that the study programme in Cluster CSIE already fulfil more than a half (above 60%) standard/indicator that used in Academics Internal Quality Audit UNDIKSHA 2021, and even 3 from 4 study programme compliance is above 80%. The minimal percentage of indicator/standard is 76% and that study programme is categorized as new study programme that incorporated with UNDIKSHA. However, that study programme showed increasity from the last year audit. Consequently, it concluded that study programme in Cluster Computer Science and Informatics Education fulfilled majority of education, research, and community service standard/indicator and additional criteria (vision and mission, governance, and Tridharma outcomes) that referred to the Accreditation Indicator 9 criteria, International Accreditation, Key Performance Indicators, Freedom to Learn-Independent Campus and put into the instrument indicator of Academics Internal Quality Audit 2021.

3.2.2 Audit Finding in Academics Internal Quality Audit UNDIKSHA 2021 in Cluster Computer Science and Informatics Education

All the study programme in UNDIKSHA especially study programme in Cluster Computer Science and Informatics Education hoped to qualify entire standard or indicator that already appointed by institution, so that, standards that have not yet fully implemented

needed to pay attention and followed up to be able increased. The distribution of standard/indicator that not yet fully qualify by each study programme in Academics Internal Quality Audit UNDIKSHA in 2021, could be stated in the Figure 3.3, as follows.

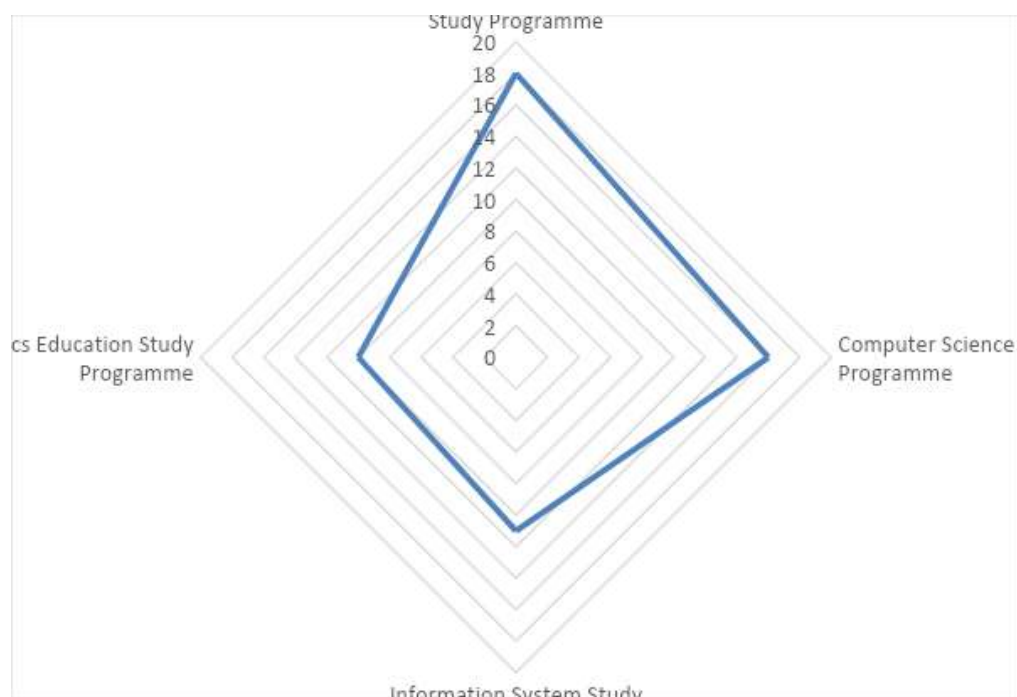


Figure 3. 3 The distribution of standard that still not fully qualify at study programme that distributed in Cluster Computer Science and Informatics Education

Above figure stated that the radar chart described amount of standard/indicator that still not fully implemented for each study programme, so that all the parties especially study programme that concerned was hoped to control and increase their performance to the standard that intended to. It seems that the most few amounts of standard/indicator that still not fully is 10 standards and most plentiful is 18 standards that still not qualify. The standard that still not qualified is more detail audit finding, categorized as inappropriarity (KTS) and OB (observation), **where KTS is finding category that still not achieve, deviate, and inapproarity with the standards or requirements that determined by university.** Meanwhile, **OB is the finding that potencial to become the inappropriarity or finding that could be recovered soon.** The distribution of the number of audit findings classified as KTS and OB in each study program in the Computer Science and Informatics Education Cluster, respectively, is shown in Figure 3.4 below.

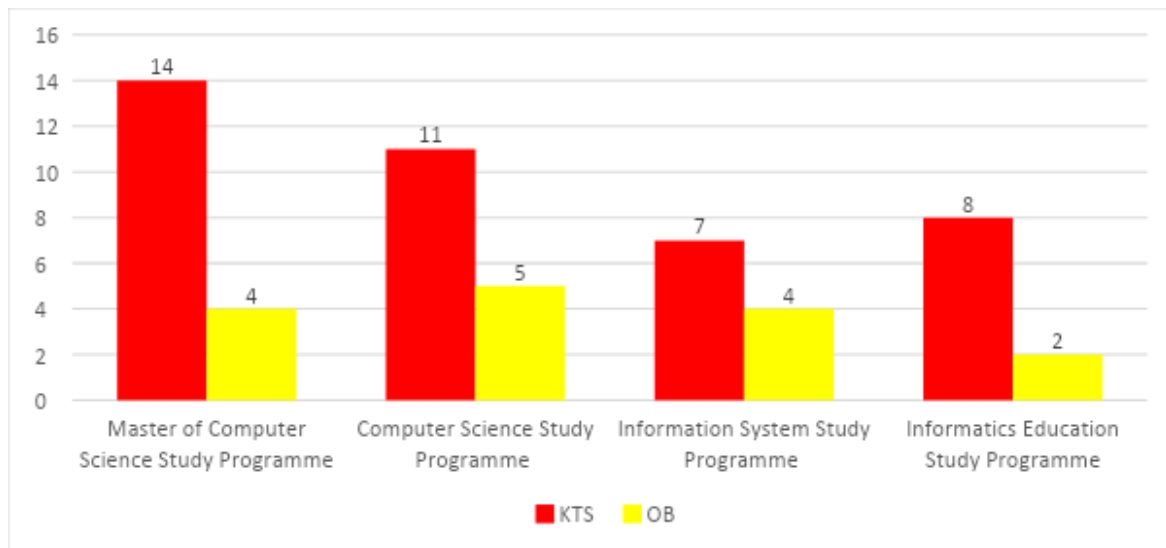


Figure 3. 4 The distribution of audit finding that categorized as KTS and OB for study programme, distributed in Cluster Computer Science and Informatics Education

Furthermore, referring the audit report from auditor for study programme was getting the summary of audit findings in general that shown inappropriarity or not fully qualify the standard/indicator from the Academics Internal Quality Audit UNDIKSHA 2021 instrument. For more details finding in every study programme is **attached**. Audit findings could be general and specific. General means that the finding appear in more than a study programme. Specifics means that the finding only appear in one study programme. The following summary of audit findings in Academics Internal Quality Audit in 2021 for study programme in Cluster Computer Science and Informatics Education could be stated as in Table 3.2, as follows.

Table 3. 2 *Audit findings in study programme in Cluster Computer Science and Informatics Education*

No	Audit Finding	Study Programme
A. Education Field		
1	Not all courses have adopted the results of research and community service.	Bachelor Programme of Informatics Engineering Education
2	There is no policy for additional requirements for graduation to achieve, for instance, TOEFL score of 450 and must publish the final project / thesis in an accredited journal at least sinta 6 and / or at scientific meetings at least national seminars.	Bachelor Programme of Information Systems, Bachelor Programme of Computer Science, Bachelor Programme of Informatics Engineering Education
3	Lecturers who have national and international competency certificates have not reached the standard above 50%.	Master Programme of Computer Science
4	In general, during the last 1 year, DTPS has never had a TOEFL test, so it is not possible to determine the TOEFL score.	Bachelor Programme of Information Systems, Bachelor Programme of Computer Science, Bachelor Programme of Informatics Engineering Education

No	Audit Finding	Study Programme
5	The low percentage of courses that involve practitioners in their learning activities has not yet reached 10%.	Bachelor Programme of Information Systems, Bachelor Programme of Computer Science,
6	Monev (monitoring and evaluation) of learning at the beginning of the semester and the middle of the semester not yet available with valid evidence	Master Programme of Computer Science
7	Valid evidence of the monitoring system and implementation and evaluation of the learning process includes the characteristics, planning, implementation, learning process and learning load students who are carried out consistently and sustainable not yet available	Master Programme of Computer Science
8	Percentage of educators who have certificates of competence above international level knowledge/skills < 5%	Master Programme of Computer Science
9	The study programme has an average lecturer performance load every semester that exceeds the standard (16 credits) or there are still lecturers with an average lecturer performance load each semester that exceeds the maximum limit.	Bachelor Programme of Computer Science, Bachelor Programme of Information Systems
10	There are not enough DTPS that have functional positions of Professor/Head Lector.	Bachelor Programme of Computer Science, Bachelor Programme of Information Systems, Bachelor Programme of Informatics Engineering Education
11	DTPS with a doctorate degree is still lacking.	Bachelor Programme of Computer Science, Bachelor Programme of Information Systems, Bachelor Programme of Informatics Engineering Education
B. Research Field		
12	The study programme does not yet have a roadmap and research strategic plan	Bachelor Programme of Information Systems, Master Programme of Computer Science
13	The study programme has not carried out monitoring and evaluation of the research roadmap	Bachelor Programme of Computer Science, Bachelor Programme of Information Systems, Bachelor Programme of Informatics Engineering Education, Master Programme of Computer Science
14	There is no industry involvement in the implementation of research	Bachelor Programme of Information Systems Master Programme of Computer Science
C. Student Creativity Programme/Community Service Field		
15	The study programme did not yet have a community services road map and strategic plan	Bachelor Programme of Information Systems Master Programme of Computer Science
16	The study programme has not carried out monitoring and evaluation of the research roadmap	Bachelor Programme of Computer Science, Bachelor Programme of Information Systems, Bachelor Programme of Informatics Engineering

No	Audit Finding	Study Programme
		Education, Master Programme of Computer Science
D. Additional (Vision Mission, Governance, Student, and Outcomes)		
17	The low number of corporate activity in International level in a year lately that involved study programme	Bachelor Programme of Information Systems, Bachelor Programme of Informatics Engineering Education
18	There were no foreign students	Bachelor Programme of Information Systems, Bachelor Programme of Informatics Engineering Education, Master Programme of Computer Science
19	There were no student research/student creativity programme outcomes that obtain IPR	Bachelor Programme of Information Systems, Bachelor Programme of Informatics Engineering Education, Master Programme of Computer Science
20	The ratio of "activities" education cooperation, research, and community service relevant to the Study Programme in the last 1 year to the number of permanent lecturers assigned as tutors in the Study Program (RK/Activity Ratio) < 1	Master Programme of Computer Science
21	Number of international level Cooperation activities in the last 1 year involving Study Programs (NKI/International Level Cooperation) < 1	Master Programme of Computer Science
22	The unavailability of legal documents for the establishment of implementing elements of quality assurance; quality documents: internal quality assurance system policies, internal quality assurance system manuals, internal quality assurance system standards; and valid evidence of the effectiveness of the implementation of quality assurance and internal quality assurance system forms; and the quality assurance cycle (EIECI/PPEPP cycle) has not yet been implemented.	Master Programme of Computer Science
23	The 6 services satisfaction measurements have not been carried out.	Master Programme of Computer Science
24	The ratio of international academic achievements to the number of students at the time of TS < 0.1%	Master Programme of Computer Science
25	The ratio of national academic achievements to the number of students at the time of TS < 2%	Master Programme of Computer Science
26	The ratio of regional/local academic achievements to the number of students at the time of TS < 4%	Master Programme of Computer Science
27	The output of research and community service that produced by students, either independently or with DTPS in the last 1 year is still lacking.	Master Programme of Computer Science
28	Percentage of lecturers who are active outside, in the form of activities: (a) Tri Dharma activities on other campuses, (b) Consultants, experts, (c) student mentors in national/international competitions < 50%	Master Programme of Computer Science
29	Average score of graduate user satisfaction level for 7 aspects (STKi / 7) < 4	Master Programme of Computer Science

No	Audit Finding	Study Programme
		Science
30	The percentage of lecture credits outside the study program is still lacking	Master Programme of Computer Science
31	The study programme does not yet have a general strategic plan, which is only up to the faculty strategic plan.	Bachelor Programme of Computer Science, Bachelor Programme of Information Systems, Bachelor Programme of Informatics Engineering Education, Master Programme of Computer Science

According to the Table 3.2 above, it seems that in Cluster Computer Science and Informatics Education was found 31 audit finding which generally distributed in the Cluster CSIE by following Academics Internal Quality Audit in 2021. The following finding that majority existed in study programme of Cluster Computer Science and Informatics Education is as follows.

A. Education and Teaching Field

1. There was no additional policy document for graduation requirements for the master programme and applied masters, for example, must be achieving a valid TOEFL score, with a score of 475 and must publish the final project in an accredited journal of at least sinta 4 and/or at scientific meetings at least international seminars.
2. The percentage of DTPS with a minimum TOEFL score of 475 against the number of small DTPS..
3. Monitoring and evaluation of the learning process for the Master of Computer Science study program has not been carried out regularly and systematically by an independent unit..
4. There were still a few of DTPS that have certificates of competence on science/skills at the national and international levels.
5. DTPS with functional positions of Professor/Head Lector were still lacking.
6. DTPS with Doctoral degrees were still lacking
7. Bachelor Programme of Computer Science and Bachelor Programme of Information Systems study programs have an average lecturer performance load per semester exceeding the standard (16 credits) or there are still lecturers with an average lecturer performance load each semester exceeding the maximum limit.

B. Research Field

1. There were not yet a research roadmap that outlined in the research strategic plan for the Bachelor Programme of Information Systems and Bachelor Programme of Computer Science study programme
2. There were not yet money (monitoring and evaluation) on the suitability of the research roadmap that formulated with the research.
3. There were not industry involvement in the implementation of research for the Bachelor Programme of Information Systems and Master Programme of Computer Science.

C. Community Services Field

1. There were no community services roadmap that is outlined in the service plan for Bachelor Programme of Information Systems and Master Programme of Computer Science study programme.
2. There were no monitoring and evaluation on the suitability of the community services roadmap formulated with the existing community services.

D. Additional Fields (Vision Mission, Governance, Students and Outcomes)

1. The number of collaboration activity in internationally that involved study programme in a year lately was still lacking.
2. The percentage of foreign students toward active students was still not qualified.
3. The percentage of course that involved practitioner in learning activity was still achieve the minimal standart.
4. The researching/students creativity programme outcomes that have IPR, n either appropriate technology .nor book with ISBN was still not qualified.
5. The students achievements academics and non-academics in national and internationally was still lacking.
6. In general study programme did not have yet strategic plan, the strategic plan was only existed in faculty.

3.3 The Problems in Academics Internal Quality Audit UNDIKSHA 2021

In general the Academics Internal Quality Audit UNDIKSHA 2021 execution especially in the Cluster Computer Science and Informatics Education already way in properly. However, there were several obstacles or problems that need to follow-up for getting attention to do recovery in the next years. The following problems that faced in Academics Internal Quality Audit UNDIKSHA in 2021 could be explained, as follows.

- 1) In preparing and carrying out the activity in the midst of COVID19 pandemic that caused many limitation to do the coordination toward between elements and the

execution of activity in every stages that existed in the Academics Internal Quality Audit UNDIKSHA 2021.

- 2) The audit execution was not relate within the schedule that already determined, because of the instrument filling out waste much time in each study programme, the busy work from auditor and others obstacle.
- 3) Several of auditor was faced obstacles in setting schedule in visitation and coordinated with the head of program/study programme, so that, the late visitation happened. As the pandemic COVID19 condition which did not end, so that the visitation activities were carried out online.
- 4) There was still study programme that late to submit the instrument that had filled out to the Quality Assurance Center related to the time that already determined. Nevertheless, it was given a deadline extension, that made the planning schedule run disorderly.
- 5) There were still study programme that filled out the instrument inappropriate with the instruction and filled incompletely, so that, the auditor is hard to do the checking and adjustment within standard that existed.
- 6) There were auditor who are late in submitting the audit finding report to the Quality Assurance Center, that impacted to the late in creating the Academics Internal Quality Audit UNDIKSHA 2021 report.
- 7) The Academics Internal Quality Audit 2021 commitee already made SOP. However, there were several auditor and auditee still do not know and understand the SOP, so that, not all of auditor and auditee have the similar understanding.
- 8) The auditor still difficullt to check the indicators/standard that existed, because the the exact guide was still not existed. This is need to be studied for the instrument that would be used in the next Academics Internal Quality Audit. The perception between an auditor and the others are not same to do the audit.
- 9) Instrument that used already covered Tridharma field and several additional criteria such as vision mission, governance, students, and outcomes achievement. Yet, that was not still able to measure the field in optimally related with the documents demand Internal Quality Assurance System.

CHAPTER IV

FOLLOW-UP RECOMMENDATIONS

4.1 Follow-up Planning Recommendations

The Academics Internal Quality Audit UNDIKSHA 2021 in Cluster Computer Science and Informatics Education that the characteristic is general, need to do the corrective actions and strategies at the University level to be not become repeated findings. According to the FGD between leader of Learning Development and Quality Assurance, leader of Institute Quality Assurance Center, executive committee and Academics Internal Quality Audit UNDIKSHA 2021, Table 4.1 described recommendations to do follow-up planning to prevent the audit finding to the study programme. In order to discussed in the Management Review Meeting that involved all the UNDIKSHA management.

Table 4. 1 Follow-up plan in the results of Academics Internal Quality Audit UNDIKSHA 2021 at Cluster Computer Science and Informatics Education

No.	Audit Results	Follow-up Planning	Responsible Person
A.	Education and Teaching Field		
1.	<p>Problem: Study Programme was not yet required students by the additional TOEFL score fulfillment requirement.</p> <p>Problem Root: institution is not yet established the TOEFL score policy for graduation.</p>	<ol style="list-style-type: none"> 1. Leaders study in further related to the importance of TOEFL for students graduation. 2. Leaders need policy making team 3. The leadership establishes a policy on the fulfillment of TOEFL requirements for student graduation. 4. Facilitating students in improving English language competence through UPT-Language, as well as facilitating the implementation of the test. 	<ol style="list-style-type: none"> 1. Vice Chancellor I 2. Head of Learning Development and Quality Assurance Institute/ LPPPM 3. Deputy Dean I 4. Deputy Director I 5. Head of UPT-language(UPT: Unit of Technical Implementation) 6. Head of Department 7. Study programme choir
2.	<p>Problem: Majority of lecturer were not have document of English language competition (TOEFL) in regularly.</p> <p>Problem Root: Institution is not established the policy related to the lecturers' English language competency increasing in regularly in the form of TOEFL test.</p>	<ol style="list-style-type: none"> 1. Leaders study in further related to the importance of TOEFL for students graduation. 2. Leaders need policy making team 3. Leaders establishes a policy on the fulfillment of TOEFL requirements for student graduation. 4. Facilitating students in improving English language 	<ol style="list-style-type: none"> 1. Vice Chancellor I 2. Head of Learning Development and Quality Assurance Institute/ LPPPM 3. Deputy Dean I 4. Deputy Director I 5. Head of UPT-Language (UPT: Unit of Technical Implementation) 6. Head of Department 7. Study programme

No.	Audit Results	Follow-up Planning	Responsible Person
		competence through UPT-Language, as well as facilitating the implementation of the test.	choir
3.	<p>Problem: DTPS that have competency certification skill/knowledge in national and/or international level was very deficient.</p> <p>Problem Root: Majority of DTPS was still not understand institution that have certificate, which related with their knowledge.</p>	<ol style="list-style-type: none"> 1. Institution motivates and facilitate lecturers in gaining the scholarly certificate that relate with the study programme 2. Institution formes team to facilitate lecturers in gaining information, mappng institution that aimed at obtaining a certificate of knowledge/skills. 3. Give aid to the lecturers in register or test in gaining the certificate. 	<ol style="list-style-type: none"> 1. Vice Chancellor I 2. Vice Chancellor II 3. Head of Learning Development and Quality Assurance Institute 4. Deputy Dean I 5. Deputy Director I 6. Head of Department 7. Study programme choir
4.	<p>Problem: DTPS that have functional position Professor/head lector was still lack.</p> <p>Problem Root: Many of UNDIKSHA lecturer are still new (little work experience) and even still CPNS (candidates for civil servants), and articles publication obstacles in reputed International journal</p>	<ol style="list-style-type: none"> 1. The planning in strategic planning either operational planning is needed to encourage lecturers to propose LK (student organization) or GB. 2. Institution facilitate the fulfilling requirements that needed by lecturers to qualify the credits number to the Head Lector/Professor, for example, article publication, IPR, book writing, etc. 	<ol style="list-style-type: none"> 1. Vice Chancellor I 2. Dean/Director 3. Vice Chancellor II 4. Deputy Director II 5. Head of Department 6. Study programme choir 7. Strategic Plan/Operational Plan Team 8. Lecturers
5.	<p>Problem: DTPS with doctoral degree is still lack.</p> <p>Problem Root: Many of lecturers in UNDIKSHA that categorized as new (little work experience) and even even still CPNS (candidates for civil servants), that constarined in scholarship, and that lecturers in each study programme are needed.</p>	<ol style="list-style-type: none"> 1. The planning in strategic planning either operational planning is needed to encourage lecturers to continue doctoral program. 2. The institution facilitates the fulfillment of requirements for further doctoral studies, for example facilitating scholarships, TOEFL training, and others. 	<ol style="list-style-type: none"> 1. Vice Chancellor II 2. Dean/Director 3. Vice Dean II 4. Deputy Director II 5. Head of Department 6. Study Programme choir 7. Strategic plan/Operational Plan Team 8. Lecturers
6.	<p>Problem: several study programme have average lecturers workload in each semester more than standard (16 credits) or there are still with the</p>	<ol style="list-style-type: none"> 1. Leaders implement lecturers work calculation in early semester. 2. Institution implements 	<ol style="list-style-type: none"> 1. Vice Chancellor I 2. Vice Chancellor II 3. Vice Dean I 4. Vice Dean II

No.	Audit Results	Follow-up Planning	Responsible Person
	<p>average workload in each semester exceeding the maximum limit.</p> <p>Problem root: Number of lecturers are still lack</p>	<p>identification of the adequacy of lecturers per scientific group.</p> <p>3. Leaders implement mapping on lecturers needed by study programme.</p> <p>4. Institution implements lecturer recruitment in study programme that have less amount of lecturers.</p>	<p>5. Deputy Director I</p> <p>6. Deputy Director II</p> <p>7. Head of Department</p> <p>8. Study Programme Choir</p>
B	Research Field		
7.	<p>Problem: Study Programme do not have research roadmap</p> <p>Problem Root: Institution do not have yet obligated study programme to create research roadmap and lecturers in general referred to the research roadmap of Head of Institution of Research and community service</p>	<p>1. Leaders requires study programme to create research roadmap.</p> <p>2. Leaders requires proposal submission that refers to the study programme research roadmap</p>	<p>1. Vice Rector I</p> <p>2. Head of Institution of Research and community service/LPPM</p> <p>3. Vice Dean</p> <p>4. Deputy Director I</p> <p>5. Research Center</p> <p>6. Head of Department</p> <p>7. Study Programme Choir</p>
8.	<p>Problem: The unavailability of monev (monitoring and evaluation) toward the appropriarity to research roadmap that formulated by lecturers research that existed in study programme is still low.</p> <p>Problem Root: The policy that related to the study programme obligation in carrying out monev of research roadmap implementation have not yet existed.</p>	<p>1. Institution of Research and community service involved study programme in the monev process of research roadmap.</p> <p>2. Quality Assurance Center and Quality Control Division of faculty/postgraduate is being involved in monev implementation in research roadmap.</p>	<p>1. Vice Rector I</p> <p>2. Head of Institution of Research and community service/LPPM</p> <p>3. Vice Dean</p> <p>4. Deputy Director I</p> <p>5. Research center</p> <p>6. Quality Assurance Center</p> <p>7. Head of Department</p> <p>8. Study Programme choir</p>
9.	<p>Problem: The industry was not involved in research roadmap.</p> <p>Problem Root: There is not policy about the obligationns to involve industry in research.</p>	<p>1. Leaders make obligations to involve industry in creating proposal in each certain research skim.</p> <p>2. Institution facilitates corporation with industry to become the partner in their research.</p>	<p>1. Vice Rector I</p> <p>2. Head of Institution of Research and community service</p> <p>3. Vice Dean</p> <p>4. Deputy Director I</p>

No.	Audit Results	Follow-up Planning	Responsible Person
			5. Research Center 6. Quality Assurance Center 7. Head of Special Job Fair (BKK) 8. Head of Departement 9. Study Programme choir 10. Lecturers
C.	Community Services Field		
10.	<p>Problem: Study Programme did not have community services roadmap</p> <p>Problem Root: Institution does not obligated study programme to create community services roadmap. In general, the lecturers were referring the community services roadmap of <i>LPPM</i> (Institution of Research and community service)</p>	1. Leaders obligate study programme to create community services roadmap. 2. Leaders require the submission of community services proposal for referring in community services roadmap. 3. Leaders facilitate study programme in struturing community services roadmap in the form of FGD and Workshop	1. Vice Rector I 2. Head of Institution of Research and community service/LPPM 3. Vice Dean 4. Deputy Director I 5. Community Services Center 6. Head of Department 7. Study Programme choir
11.	<p>Problem: There was not monev toward the appropriarity of community services roadmap that formulated by the research in study programme.</p> <p>Problem Root: There is not policy from institution relate to the study programme obligation in implementing community service monev</p>	1. Institution of Research and community service involves study programme in the implementation of research roadmap. 2. Quality Assurance Center and Quality Control Division are being involved to join in the monev implementation of research roadmap monev.	3. Vice Rector I 4. Head of Institution of Research and community service 5. Vice Dean 6. Deputy Director I 7. Community Services Center 8. Quality Assurance Center 9. Head of Department 10. Study Programme choir

No.	Audit Results	Follow-up Planning	Responsible Person
D.	Additional Fields (Vision Mission, Governance, Students, and Students Outcomes)		
12.	<p>Problem: The number of corporating activity in internationally one year lately that involved study programme was still lack.</p> <p>Problem Root: International corporation is still not plenty and equally for all study programme that existed in UNDIKSHA.</p>	<ol style="list-style-type: none"> 1. Institution facilitates study programme to do corporation in internationally relevant to the study programme in equally. 2. Institution through special job fair is optimizing the corporation international activity that existed in study programmes in relevant. 	<ol style="list-style-type: none"> 1. Vice Rector I 2. Vice Dean I 3. Deputy Director I 4. Head of Special Job Fair 5. Head of Departments 6. Study Programme choir
13.	<p>Problem: The percentage of course credits in outside of study programme was still lacking.</p> <p>Problem Root: The curriculum is not flexible to be able to facilitate the score conversion from the learning activity in the outside of study programme.</p>	<ol style="list-style-type: none"> 1. Studying and Revision curriculum to be able to accommodate Freedom to Learn-Independent Campus activity to convert in courses in flexibility. 2. Leaders motivated study programme for motivating study programme in taking lecture in the outside of study programme. 3. Making the system of Freedom to Learn-Independent Campus activity that is more integrated for 8 activities from registration until score conversion. 	<ol style="list-style-type: none"> 1. Vice Rector I 2. Head of Learning Development and Quality Assurance Institute 3. Vice Dean I 4. Deputy Director I 5. Quality Assurance Center 6. Head of Special Job Fair 7. Head of Technology, Information and Communication Unit of Technical Implementation 8. Head of Department 9. Study Programme choir
14.	<p>Problem: Study Programme was not have foreign students.</p> <p>Problem Root: The minimum international corporation relate to the student exchange and the unreadiness study programme to facilitate foreign students.</p>	<ol style="list-style-type: none"> 1. Leaders held international corporation related to the student exchange intensively. 2. The further socialization for targetting foreign students. 3. Prepare curriculum, facilitation, human resources and so on, to accomodate foreign students. 	<ol style="list-style-type: none"> 1. Vice Rector I 2. Vice Rector III 3. Vice Dean I 4. Deputy Director I 5. Vice Dean III 6. Head of Departments 7. Study Programme choir

No.	Audit Results	Follow-up Planning	Responsible Person
15.	<p>Problem: Study Programme was not have strategic plan.</p> <p>Problem Root: The policy to create study programme strategic plan is not existed. It was only refered to the strategic plan in faculty/university.</p>	<ol style="list-style-type: none"> 1. Leaders create and establish policy to obligate study programme in create strategic plan. 2. Study programme develop Strategic Plan Creator Team that referred to the faculty and university strategic planning. 3. Monitoring and Evaluation study programme strategic plan creating from quality control division. 	<ol style="list-style-type: none"> 1. Vice Rector I 2. Vice Dean I 3. Deputy Director I 4. Head of Learning Development and Quality Assurance Institute 5. Head of Departments 6. Head of Quality Control Division 7. Study Programme choir
16.	<p>Problem: The number of research outcomes/students creativity programme that have IPR, appropriate technology or book with ISBN was still low.</p> <p>Problem Root: The minimalization of students involving in the research implementation/lecturers community services, and the nescience of students related to that outcomes.</p>	<ol style="list-style-type: none"> 1. Leaders obligate lecturers to involve students in research/community services. 2. Giving training to the students relate to the research publications outcomes/community services. 3. Encouraging lecturers to write the students name that asked and collaborated in publications. 4. Leaders form student publication acceleration team. 	<ol style="list-style-type: none"> 1. Vice Rector I 2. Vice Rector III 3. Vice Dean I 4. Deputy of Director I 5. Vice Dean III 6. Head of Institution of Research and community service 7. Head of Departments 8. Head of Quality Control Division 9. Study Programme choir
17.	<p>Problem: The students achievement in academic and non-academic in internationally was still lack.</p> <p>Problem Root: The lack of participation and students readiness in facing competition academic/non-academic in internationally.</p>	<ol style="list-style-type: none"> 1. Leaders form acceleration students achievement team in international level. 2. Leaders facilitate the funding to participate in competition in international level 3. Giving special reward to the students that achieved in internationally. 4. Selection system is being implemented in properly and transparent. 5. Doing construction process to the students intensively. 	<ol style="list-style-type: none"> 1. Vice Rector II 2. Vice Rector III 3. Vice Dean II 4. Deputy Director II 5. Remuneration team 6. Head of Departments 7. Study Programme choir

No.	Audit Results	Follow-up Planning	Responsible Person
		6. Giving special grade to the supervisor for students whose students excel at the international level.	
18.	<p>Problem: The percentage of courses that involved practitioners in learning activity was not achieve minimum standard.</p> <p>Problem Root: The existing of practitioner that relevant with study programme is still low and not equally in every study programme.</p>	<p>1. The institution through special job fair facilitates each study programme with practition choices relevant with the study programme in equally.</p> <p>2. Requiring study programme to involve practitioner for every study programme that possible in each semester.</p>	<p>1. Vice Rector I</p> <p>2. Vice Dean I</p> <p>3. Deputy of Director I</p> <p>4. Head of Special Job Fair</p> <p>5. Head of Departemnts</p> <p>6. Study Programme choir</p> <p>7. Lecturers</p>

4.2 Proposal of Problem-Solving Solutions

Alternative solutions that offered or taken to prevent several problem that encourtered in the Academics Internal Quality Audit UNDIKSHA 2021 could be explained, as follows.

- (1) Need to prepare the system that is more ready and mature to prevent the problems that found in the midst of pandemic COVID-19.
- (2) For the difficulty to determine visitation schedule, quality assurance center and auditot that always try to increase the coordination within the Head of Departments/Study Programme and wait for the visitation schedule that prepared by Head of Department/Study Programme either face-to-face or online situation.
- (3) SOP of Academics of Internal Quality Audit need to recover and socialize to all the auditor and auditee, so that, it becomes the Standard Procedure for all Auditor in auditing the department/study programme in preparing the next Academics Internal Quality Audit.
- (4) Need to emphazie from the start for auditor and auditee to be discipline in following the Academics Internal Quality Audit work agenda. In order to the lateness of auditor and auditee in finishing their responsibility to being not disturbing the expeditious of Academics Internal Quality Audit.
- (5) Need to do the similarity of perception that is more comprehensive between auditor in each others in carrying out the audit, so that, the audit results for between one and

others auditee do not happen bias as a result of the different views of the auditors in conducting the audit.

- (6) Instrument that used need to pay attention and study in further, i.e by adding audit scope and making guide/matrix score in each indicator/standard that used , so that, all of auditor and even auditee have perception and understanding that similar in checking or filling out the next of Academics Internal Quality Audit instrument.

CHAPTER V

CLOSING

5.1 Conclusion

Regarding to the analysis results in the previous chapter, the following things that could be concluded relate the results of Academics Internal Quality Audit UNDIKSHA 2021.

1. The execution of Academics Internal Quality Audit UNDIKSHA 2021 is followed by all the Bachelor Programme and Master Programme in the Cluster Computer Science and Informatics Education (participation percentage 100%), and involving 8 auditor people that already followed the training before.
2. The instrument that used in Academics Internal Quality Audit Cluster Computer Science and Informatics Education is instrument Academics Internal Quality Audit UNDIKSHA 2021 that is different in significantly with the instrument that used in the last years. Instrument was created by referred on: accreditation assessment matrix 9 criteria, Key Performance Indicators, International Accreditation, and Freedom to Learn-Independent Campus in the scope of education field audit, research, community services, vision and mission, governance, students, and Tridharma outcomes, also the fulfilment of the indicator/standard demands that different in each stratum. The number of Indicator item that need to fill out in the Cluster Computer Science and Informatics Education, such as: Bachelor Programme with 80 items and Master Programme with 75 items. On the other hand, the difference within this year's audit instrument is added by follow up form review in the previous Academics Internal Quality Audit UNDIKSHA 2020 to accomodate the Establishment, Implementation, Evaluation, Control and Improvement in the Internal Quality Assurance System.
3. In general, there are 9 standards that dominant to become finding in 2020 that already got the follow-up and increasing of standard achievement in the 2021, as follows.
 - ✓ Courses study programme is already completed by the learning device (syllabus, semester course contract, student assignment plan, course contract). That thing is caused from the policy that need to upload learning device in the SIAK (Academic Information System) UNDIKSHA before score uploading.
 - ✓ The move of learning process already started to implement in regular and systematic by the independent unit. Each faculty/postgraduate empowering Quality Control Division of faculty/postgraduate.

- ✓ Courses that utilized the results of DTPS research/community services in the implementation of learning is start to increase. That utilization could be form of teaching material, learning media, research results citation, and others form of integration.
 - ✓ The involving of students in the lecturers research and community services is already adequate. This thing is cauded by the obligation to ask students in the DIPA research.
 - ✓ The publication of research/community services article and IPR is already increase. This thing could be achieved, because there is help or special reward in this thing in remunarisaton.
 - ✓ The guarantee of quality that carried out by Quality Control Division in each faculty/postgraduate already started optimal. From the Quality Control Division-faculty/postgraduate, in each faculty already have quality document and try to implement the Establishment, Implementation, Evaluation, Control and Improvement from Internal Quality Assurance System.
 - ✓ Tracer study is implemented by the institution that already more integrated with study programme, because the process is involving study programme directly.
 - ✓ Study programme that have foreign students is already increased. Institution from special job fair carries out the corporation with overseas university about international student exchange actively.
 - ✓ Students academic and non-academic achievements in international level is already increaded from the previous year. Institution from students is encouraging and constructing students from the *Gebrak Prestasi* program actively either in the institutional level, faculty, or department/study programme.
4. In genera, there were 18 findings that majority distributed in entire study programme. The following audit that majority appear in entire study programme in each field in the scope of Academics Internal Quality Audit UNDIKSHA 2021, are, as follows.
- a. Education and Teaching Field
- ✓ The course that utilise the DTPS research/community services results in the implementation of learning was still low.
 - ✓ Study programme was not have the requirements additional policy in students graduation is the need to achieve TOEFL score. The study programme condition waited the policy from the university level to to avoid overstepping their authority.

- ✓ There was no policy in the study program regarding the regular fulfillment of TOEFL for DTPS.
 - ✓ The number of DTPS that have certificates of competence on the knowledge/skills possessed at the national and international levels was still small.
 - ✓ Functional positions of Professor/Head Lecturer in Bachelor Programme of Computer Science, Bachelor Programme of Information Systems, and Bachelor Programme of Informatics Engineering Education study programs were still lacking.
 - ✓ DTPS with doctoral degrees in several study programs is still lacking.
 - ✓ Bachelor Programme of Computer Science and Bachelor Programme of Information Systems study programs have an average lecturer performance load per semester exceeding the standard (16 credits) or there are still lecturers with an average lecturer performance load per semester exceeding the maximum limit.
- b. Research Field
- ✓ There was no the research roadmap that put into the research strategic plan.
 - ✓ The unavailability money toward the appropriarity of research roadmap that formulated in the research that existed in study programme.
 - ✓ There was no the industrial involving in the research execution.
- c. Community Services Field
- ✓ There was no research roadmap as outlined in the research strategic plan.
 - ✓ There was no available monitoring and evaluation on the suitability of the research roadmap formulated with existing research in the study program
- d. Additional Field (Vision Mission, Governance, Students, dan Outcomes)
- ✓ The number of international level cooperation activities in the last 1 year involving study programs is still lacking.
 - ✓ The percentage of foreign students to active students has not been met.
 - ✓ In general, study programs do not have a strategic plan, which is only up to the strategic plan of the faculty.
 - ✓ The number of research outputs/PKM students who have IPR, appropriate technology or books with ISBN is still low.

- ✓ Achievement of academic and non-academic students at the international level is still lacking.
 - ✓ The percentage of courses that involve practitioners in their learning activities have not reached the minimum standard.
5. The result of FGD between leaders of Learning Development and Quality Assurance Institute, leaders of Quality Assurance Center, Executive Committee, and Auditor is getting a follow-up plan for improvement was obtained for the 18 audit findings, which were then reported to the Head of the Institution for discussion at the Management Review Meeting.

5.2 Suggestion

Regarding to the results that achieved in the Academics Internal Quality Audit UNDIKSHA 2021 is suggested several things, as follows.

- (1) The preparation and execution auditee must be more coordinated, so that, it could be way in effectively and efficiently, and pay attention to the limitations that happen because of COVID-19 pandemic.
- (2) University leaders is still required all the departments/study programme to become auditee in this thing that could be delivered through the leadership meetings.
- (3) Giving sanction in assertively by the university/faculty parties for the department/study programme, that are not participated as auditee in the audit implementation.
- (4) Leaders encourage departments/study programme to continuously make improvements and maintain high quality in accordance with follow-up recommendations.