HELPING EACH OTHER DO

Dirisana+

Quality assurance plan and final reporting on Work Package 3

Co-funded by the
Erasmus+ Programme
of the European Union

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Funding statement

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Introduction

The Dirisana+ project (Grant number 618489-EPP-1-2020-1-ZA-EPPKA2-CBHE-JP) is an EU co-funded grant project aiming to provide culturally responsive quality health and science education in southern Africa. The objective is to focus on developing our staff through training programmes and studies; to align our education strategies around issues affecting student pass rates, and work readiness in the health care sector (clinical relevance); to use teaching methods that will be conducive of quality education in a resource constraint environment; to acknowledge and support student's needs; to collaborate with teaching and learning practices; and to make constructive advice for alignment of the curriculum with the ready world of work in South Africa.

This document serves as both a formal quality assurance plan as well as a report on the review of all work packages based on feedback questionnaires shared at the conclusion of the grant.

Work Package 3 Outline

In WP3, the quality assurance of ongoing activities will be reviewed through reports and meeting. Formally, WP3 consists of four main objectives:

- **WP3.1: Biannual quality reports**

  Reports written bi-annually by the consortium on the progress of all activities.
  (These report periods were amended to <u>annually</u> rather than bi-annually.)

- **WP3.2: Biannual meetings**

  Meetings held virtually or in person twice a year for the consortium where progress on activities is shared and methods of QA considered and discussed.

- **WP3.3: Quality reports will be disseminated on the website**

  Annual quality reports are posted the website annually in the form of a full report or summary newsletter for review by the consortium and public.

- **WP3.4: Final meeting hosted by UP**

Contributing partners

The following institutions compile the Dirisana+ grant and contributed to the development of quality control measures for various activities during the action:

University of Pretoria (UP)

Pretoria, South Africa

Coordinator (Jan 2021 – Jul 2024)

Sefako Makgatho Health Sciences University (SMU)

Ga-Rankuwa, South Africa

Partner (Jan 2021 – Jul 2024)

University of the Witwatersrand (WITS)

Johannesburg, South Africa

Partner (Jan 2021 – Jul 2024)

University of Namibia (UNAM)

Windhoek, Namibia

Partner (Jan 2021 – Jul 2024)

Welwitchia University (WU)

Windhoek, Namibia

Partner (Jan 2021 – Jul 2024)

University of Turku (UTU)

Turku, Finland

Partner (Jan 2021 – Jul 2024)

Maastricht University (UM)

Maastricht, the Netherlands

Partner (Jan 2021 – Jul 2024)

University College Dublin (UCD)

Dublin, Ireland

Partner (Jan 2021 – Jul 2023)

PART A: QUALITY ASSURANCE PLAN

1. WORK PACKAGE 1: PREPARATION

Quality Assurance criteria applicable in this work package:

- Completeness of documents
- Accuracy of information
- Timeliness of submissions
- Appropriateness of appointments

Activity / Outputs / Process	Participants	Internal and/or External QA procedures
Project Kick Start Meeting hosted by University of Pretoria	All partners UP – Host WU – QA	**Internal:** Evaluation survey post meeting **External:** Reporting to EU funders
Sign Partner Agreements	All partners	**Internal:** Signed agreements filed in Project Drive **External:** Signed agreements accepted by auditors
Review Institutional objective plans	All partners	**Internal:** Each institution review own plan **External:** UP review plans for alignment with overall project objectives
Appoint Finance manager (UP) staff (partner institutions)	UP	**Internal:** Appoint a financial officer
Appoint Project Managers, Theme chairs, representatives per institution	All partners	**Internal:** internal appointments of key people per institution
Identify candidates for postgraduate study	UP, SMU, Wits	**Internal:** Screening per institutional policies
Establish MoU for work packages	All partners	**Internal:** Signing of agreements
Accept QA plan	All partners	**Internal:** Review QA plan and align projects **External:** EU QA processes
Accept Monitoring processes	All partners	**Internal:** Agreement for QA monitoring processes and success criteria
Purchasing of Equipment	UP, UNAM, Wits	**Internal:** Purchase appropriate equipment for work package 2

2. WORK PACKAGE 2: DEVELOPMENT

Quality assurance criteria applicable to all themes within Work Package 2 include:

- Suitability of resources
- Appropriateness of developments
- Feasibility of use/implementation
- Relevance to users
- Accuracy of information
- Compliance to MoU between partners
- Timely response to potential risks
- Usability of outputs

Theme 1: Technology in advancing teaching and learning

Activity / Outputs / Process	Participants	Internal and/or External QA procedures
Software adaptations to needs	UP, UNAM, SMU, Wits	**Internal:** Partners review potential risks **External:** Stakeholder feedback
Research proposals, execution and write-up	Southern African partners	**Internal:** Research committee peer review per institution; **External:** Ethical clearance certificate obtained. Peer review for conference, journal submissions.
Teaching material developed (physical outputs i.e. 3D prints)	All	**Internal:** partners review outputs **External:** Stakeholders and users feedback
Review of teaching material (Online teaching video's)	UW, SMU, UNAM	**Internal:** Peer review between partners **External:** Users and stakeholders feedback
Workshops and short courses	All	**Internal:** partner review on content **External:** participant feedback
Guidelines (SOP, Catalogue)	UP, SMU, UNAM, UW, Wits	**Internal:** EU partners review (feedback) **External:** Users and stakeholder feedback

Theme 2: Formative and Summative Assessment in the Clinical and Basic Health Sciences

Activity / Outputs / Process	Participants	Internal and/or External QA procedures
QA of multiple-choice questions for anatomical sciences generated by the University of Pretoria	UP SMU WITS UNAM WU	**Internal:** Questions in various subjects of anatomy, osteology, and histology created and reviewed by a group of academic staff **External:** Feedback from users
Choice of platform to host data	Wits	**Internal:** Peer review of possible platforms **External:** Feedback from users
In-service training to shred, upload and maintain questions	All	**Internal:** Peer review of content **External:** Participant and stakeholder feedback
MoU	All	**Internal:** Peer feedback **External:** UP legal department

Theme 3: Academic and Research Literacy

Activity / Outputs / Process	Participants	Internal and/or External QA procedures
Writing workshops	All	**Internal:** Peer review of content **External:** Participant feedback
Establishing of UG Journal	All	**Internal:** Peer review of processes **External:** Publisher feedback

Theme 4: Perceptions and Attitudes of Students and Staff toward Inter-Professional Education (IPE) Models

Activity / Outputs / Process	Participants	Internal and/or External QA procedures
Research activities	All	**Internal:** Collaboration and feedback **External:** Ethics clearance

Conference presentations	All	**Internal:** Peer review of abstract submissions
		External: Acceptance by conference academic panel
Awareness material (video)	All	**Internal:** Consortium peer review
		External: Stakeholder feedback

Theme 5: Curriculum Development in Medicine, Health Care, and Basic Health Sciences

Activity / Outputs / Process	Participants	Internal and/or External QA procedures
Curriculum review of identified programmes	UP, Wits	**Internal:** Compliance to academic committee standards
		External: Regulatory body feedback
Research – PhD, MSc projects	All	**Internal:** Sharing of projects
		External: Ethical clearance and PG peer review committees
Creation of a LogBook	UNAM	**Internal:** Inter-departmental review
		External: Stakeholder feedback

Theme 6: Inclusivity and Socio-Cultural Diversity in Health Professions Education

Activity / Outputs / Process	Participants	Internal and/or External QA procedures
Workshops	All	**Internal:** Peer review
		External: Stakeholder and participant feedback

3. WORK PACKAGE 3: QUALITY PLAN

Quality assurance criteria applicable to all themes within Work Package 3 include:

- Completeness of reporting
- Accuracy of information
- Relevance to partners
- Risk identification – appropriateness of actions
- Continuity of partnerships

Activity / Outputs / Process	Participants	Internal and/or External QA procedures
Review of Interim Meeting I	Host: UP	**Internal:** Feedback survey
Review of Interim Meeting 2	Host: Wits	**Internal:** Feedback survey
Review of Interim Meeting 3	Host: SMU	**Internal:** Feedback survey
Review of Interim Meeting 4	Host: UNAM	**Internal:** Feedback survey
Review of Interim Meeting 5	Host: UP	**Internal:** Feedback survey
Review of Final Meeting	Host: UP	**Internal:** Feedback survey
Biannual quality reports		**Internal:** Peer review **External:** Acceptance by EU

4. WORK PACKAGE 4: DISSEMINATION AND EXPLOITATION

Quality assurance criteria applicable to all themes within Work Package 4 include:

- Appropriateness of content
- Correctness of information
- Relevance to stakeholders
- Compliance to marketing standards
- Consistency in postings

Activity / Outputs / Process	Participants	Internal and/or External QA procedures
Posting grant-related activities on social media pages (Instagram, Facebook, LinkedIn, and Twitter/X)	UP SMU WITS UNAM WU	**Internal:** Monthly posting plans designed by representatives from each institution All images and captions were reviewed by a UP **employee** not part of the social media dissemination team before being approved to be uploaded **External:** Social media insights tracked through the application built-in metrics to ensure consistent growth in reach and following and gauge individual post metrics
Storage of material	SMU	**Internal:** Internal peer review before uploading **External: F**eedback from stakeholders and users

5. WORK PACKAGE 5: MANAGEMENT

Quality assurance criteria applicable to all themes within Work Package 5 include:

- Compliance to EU standards
- Consistent reporting
- Completeness of information
- Collaborative partnerships
- Detailed account of progress monitoring

Activity / Outputs / Process	Participants	Internal and/or External QA procedures
Continuous monitoring of partner spending reported throughout the grant for all institutions	UP SMU WITS UNAM WU UM UTU UCD	**Internal:** Necessary EU templates and documents collected and reviewed by consortium partners External: All documents reviewed by UP and reporting totals tracked to identify foreseeable spending issues
Audit of the final financial statement and reporting documentation	UP Ernst & Young	**Internal:** All reporting documentation submitted by partner institutions reviewed by UP to ensure EU templates are completed and that sufficient evidence of activities is presented **External:** External audit performed on the grant financial statement and reporting documentation by *Ernst & Young* before submission to the funder
Reporting to the EU (interim reporting)	All partners	**Internal:** Collaborative writing of reports, peer review **External:** EU acceptance of report
Coordination of project (management)	All partners	**Internal:** consortium feedback on surveys on progress **External:** Value of the outputs by stakeholders

PART B: FINAL QUALITY ASSURANCE REPORT

1. INTRODUCTION

This quality assurance report presents an overview of the Dirisana+ (SANA+) project, an EU-funded capacity-building initiative aimed at enhancing health science education in southern Africa. The project, identified by the grant number 618489-EPP-1-2020-1-ZA-EPPKA2-CBHE-JP, seeks to provide culturally responsive and evidence-based health and science education that empowers students to effectively address the diverse health needs of individuals, families, communities, and populations, even in resource-constrained environments.

Central to the Dirisana+ project is the commitment to developing faculty through innovative training programs and research opportunities. By aligning educational strategies with international standards and enhancing work readiness in the healthcare sector, the project aims to equip educators and students with the necessary skills and knowledge to thrive in their respective fields. The initiative emphasizes the importance of recognizing and supporting the unique needs of students, fostering collaboration in teaching and learning practices, and ensuring that curricula are constructively aligned with the realities of the job market in southern Africa.

The project encompasses a multifaceted approach to capacity building, focusing on six key themes within the development work package: technology, formative and summative assessment, academic literacy, inter-professional education (IPE), socio-cultural diversity, and curriculum development. These themes guide the development of research topics, teaching materials, and assessment tools, ensuring that the educational offerings are relevant and applicable to the local context. By leveraging advanced technologies, such as 3D teaching materials and assessment databanks, and promoting inter-professional collaboration, the Dirisana+ project aims to create a dynamic and inclusive learning environment.

This report will detail the quality assurance methodology employed throughout the project, summarize the findings from monitoring and evaluation activities, and provide recommendations for sustaining the project's achievements. Through rigorous quality assurance processes, the Dirisana+ project strives to maintain high standards in educational practices and outcomes, ultimately contributing to the enhancement of health science education in the region.

When designing the quality assurance framework for the Dirisana+ project, the consortium carefully considered various characteristics of quality that would apply to the different project activities. These characteristics served as guiding principles to ensure the project outputs and processes met the desired standards of excellence. The consortium valued the following key characteristics:

- Reliability: The stability and consistency of the project's products or outputs, particularly in relation to their applicability and transferability to other settings. This was especially important for the sharing of resources and best practices among partner institutions to facilitate effective implementation.

- Functionality: The degree to which the project's products or outputs performed their intended function. This characteristic ensured that the developed materials, tools, and resources effectively supported the project's objectives and met the needs of the target beneficiaries.

- Relevance: The extent to which the project's products or outputs aligned with the actual needs and priorities of the beneficiaries, including partner institutions and their students. Maintaining relevance was crucial throughout the project to ensure that all activities were appropriate, contextually suitable, and responsive to the evolving needs of the partners and beneficiaries.

- Timeliness: The efficient and timely delivery of products, outputs, and services. This characteristic was essential in enabling the consortium to be responsive to emerging needs, adapt to challenges, and ensure that project activities remained on track and delivered within the specified timeframes.

- Compliance: Adherence to established guidelines, regulations, and standards that govern the production and delivery of products and processes. This required continuous monitoring through regular meetings, audits, evaluations, and updates to processes to ensure compliance with relevant frameworks and best practices.

- Accountability: Taking responsibility for actions, decisions, and outcomes related to the project work. Fostering a culture of understanding individual roles and responsibilities in maintaining quality and meeting objectives was pertinent for achieving the desired outputs and products.

These quality characteristics were applied across three key dimensions of the project:

- **Products** - The physical outputs developed within the project's work packages. The focus was on assessing the quality of these products through internal and external review processes, evaluating their usefulness to partners, end-users, and stakeholders, and considering their future sustainability.

- **Process and Project Management** - This dimension allowed partners to evaluate the quality of project management from various perspectives. It involved assessing the effectiveness of implementation processes, identifying factors that facilitated timely achievement of objectives and goals, and evaluating the overall efficiency in meeting project goals. Additionally, it included the assessment of progress monitoring processes and the identification of risks and possible actions to ensure the project's sustainability.

- **Partnership** - This dimension focused on reviewing the effectiveness and efficiency of collaboration between partner institutions within the work packages. It aimed to identify areas for improvement and best practices in fostering strong partnerships and collaborative efforts.

The quality assurance report will summarize the findings from these dimensions, provide recommendations for improvement and sustainability of the overall project, and include key lessons learned. To gather comprehensive feedback on the quality of project activities, a survey ([Survey Link](#)) was circulated among partners during the final meeting of the project and the results are incorporated within the different sections of this report.

2. QUALITY ASSURANCE ACCORDING TO WORK PACKAGES

<u>**Work Package 1**</u>**: Preparation and Facilitation**

Within this work package all partners within the consortium were introduced, key roles and responsibilities were allocated among the partners as shown in table 1.

Table 1: Introducing the partner organisations, roles and responsibilities

Institution name	Role	Responsibility
University of Pretoria (UP)	Coordinator	WP 1,2,5
Sefako Makgatho University (SMU)	SA Partner	WP 2,4
University of the Witwatersrand (Wits)	SA Partner	WP 2,3
University of Namibia (UNAM)	Namibian Partner	WP 2,3
Welwitchia Health Training Centre (WHTC)	Namibian Partner	WP 2
Maastricht University (MU)	EU Partner	WP 2
University of Turku	EU Partner	WP 2
University College of Dublin	EU Partner	Withdrawn

The indicators for the 5 work packages were confirmed and accepted during the kick start meeting which was held virtually on 3 - 5 March 2021. Processes for collaboration, communication were established as well as the quality standards for the project. Roles and responsibilities were unpacked and expected outcomes were tabled for the different work packages.

The main quality characteristic for this work package, was accountability and was achieved as follows:

- Each partner taking responsibility, as set out at the kick start meeting, for the achievement of the outcomes. By signing the agreements, actively participate in activities.

- Established clear performance indicators and setting objectives for each of the projects in work package 2. Engage in performance and progress monitoring.

- Being transparent in decision making and reporting of progress.

<u>Survey findings related to the partnerships within the consortium:</u>

From the information provided not all members involved in the various projects within the consortium joined from the conceptualisation of the application in 2020. From the 31 respondents only 7 joined from the beginning or initiation of the project. Most of the respondents joined during the course of 2021 at the Kick Start Meeting, with one indicating they joined in September of 2021 at the first interim meeting. People that joined the projects during 2022 - 2024 were involved with specific project activities and did not require being involved from the start. As illustrated in figure 1.
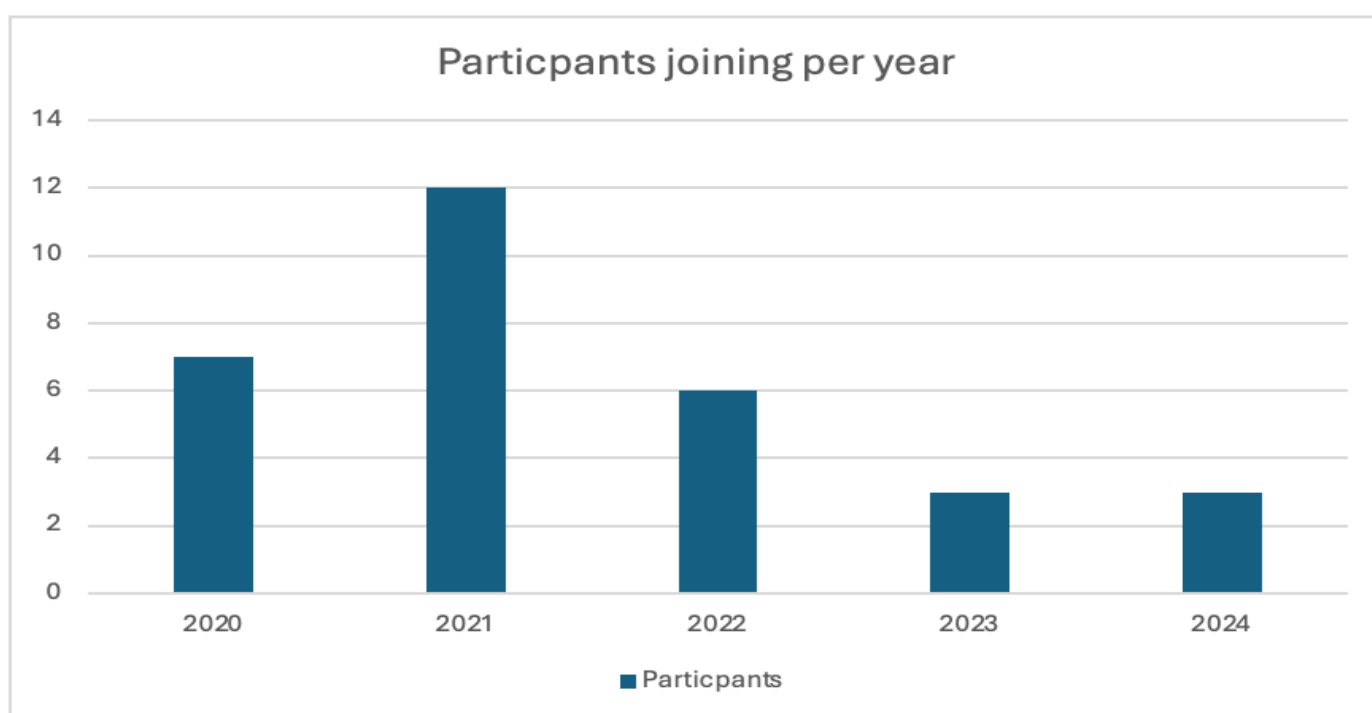

Figure 1: Joining date participants from partner institutions

Figure 2: Roles of participants in project

Within the Southern African consortium partners, staff have taken up various roles (figure 2) that facilitated the implementation of the various activities especially in work package 2 that was divided into 6 themes but also included administrative roles within the broader context of the project, as shown in figure 3.

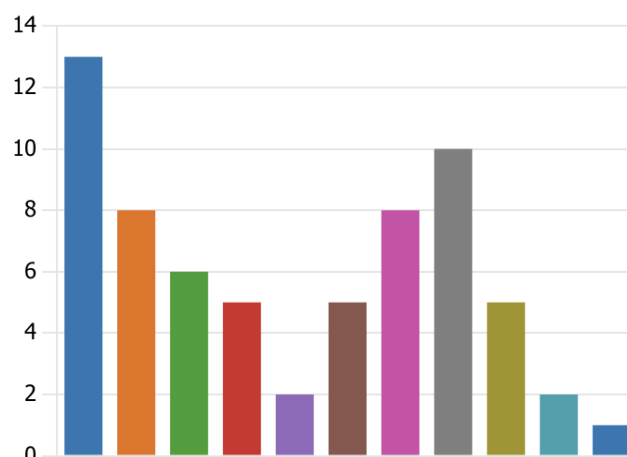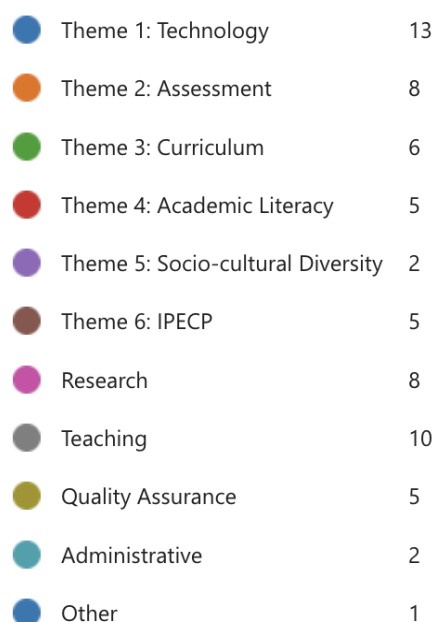|	
Theme 1: Technology	13
Theme 2: Assessment	8
Theme 3: Curriculum	6
Theme 4: Academic Literacy	5
Theme 5: Socio-cultural Diversity	2
Theme 6: IPECP	5
Research	8
Teaching	10
Quality Assurance	5
Administrative	2
Other	1

Figure 3: Roles within the themes and project

A specific question was asked in the survey about the overall quality of the project that relates to the indicators of work package 1 and the responses can be seen in the Figure 4 below, and on all the statements, most agree that the project's quality was good.
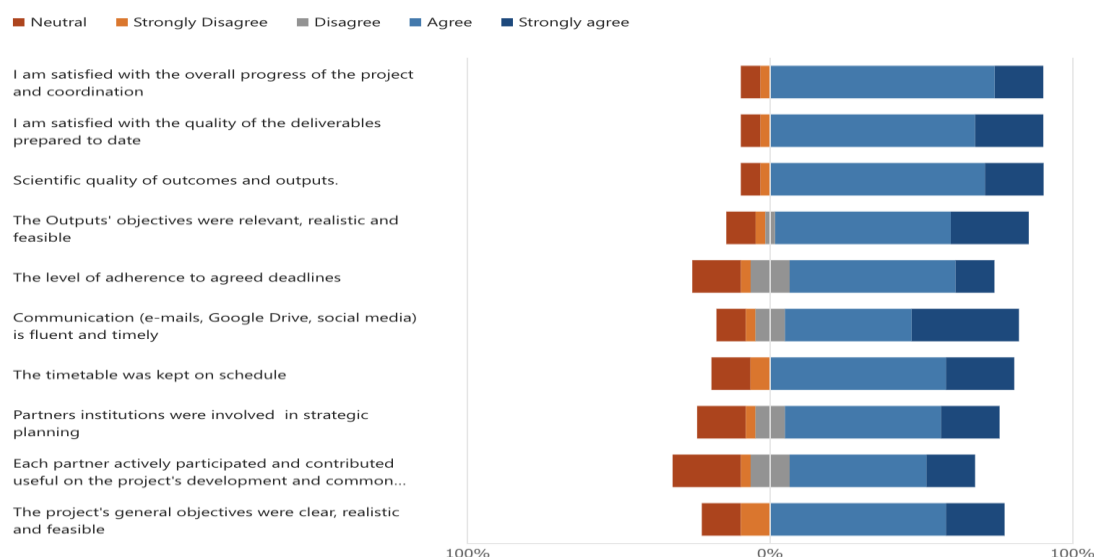
Figure 4: Overall impression of the quality of the project

The overall quality of the processes within the project are presented in Figure 5, displaying the average score per item. The processes were seen to be contributing to the success of the projects and achievement of outputs, however, communication and collaboration between partners could be improved. The statements reflected are from questions 9-15 on the survey.

Figure 5: Average rating on the quality of the processes

<u>**Work Package 2**</u>: Development – Research and Teaching

The same four Likert-style questions were posed to participants for the outputs of all six themes as shown in figure 6.

	Strongly Disagree	Disagree	Agree	Strongly agree	Neutral
The general quality and usefulness of the outputs developed was adequate	◯	◯	◯	◯	◯
Overall satisfaction of the products' usefulness for partners, end-users, stakeholders and for future sustainability	◯	◯	◯	◯	◯
The feedback received from stakeholders to products is very positive	◯	◯	◯	◯	◯
The products can be incorporated by each partner	◯	◯	◯	◯	◯

Figure 6: Likert-style questions for themes

Participants generally agreed that the outputs produced were helpful to the target groups, well structured, and of highly quality. The responses varied from 'strongly agree' to 'neutral'; no 'disagree' or 'strongly disagree'. The quality of the outputs for each of the six themes was gauged individually.

Technology in Advancing Teaching and Learning

Fourteen (14) / 45 % of participants indicated they were involved with the Technology in Learning theme.

 Key outputs and contributions of the Technology theme include:

1) 3D printing and scans of anatomy and forensic anthropology models.

2) Plastination of specimens.

3) Workshops; online learning, Moodle, and 3D printing,

4) Training videos; birthing simulator and 3D printing.

5) Anatomy dissection videos.

6) Catalogue for 3D anatomy models and human skeletal remains.

7) SOP for 3D printing.

8) Electronic logbooks for occupational therapy.

Outputs are mainly centred around 3D imaging, printing of 3D models, and plastination of specimens to improve students' visualisation and spatial orientation in learning anatomy and forensic anthropology. A catalogue of 3D models printed by the consortium partners was compiled, and the five 3D laboratories contributed to writing standard operating procedures (SOP) and manuals for printers. Troubleshooting guides and helpful hints for future technicians were added, which speaks to the sustainability of the laboratories.

Consortium partners externally reviewed training videos and dissection videos. Videos were evaluated using the following template: Dirisana+ Criteria for review of video.docx

Another technology output was the development of a logbook app for occupational therapy at UNAM. Research on the app's value and usefulness has been conducted and will be reported by the end of 2024.

Workshops and interim meetings were quality-assured through post-workshop surveys. The surveys assessed participants' perceived learning, usefulness of objectives in practice, expectations met, value, and organization of the workshop.
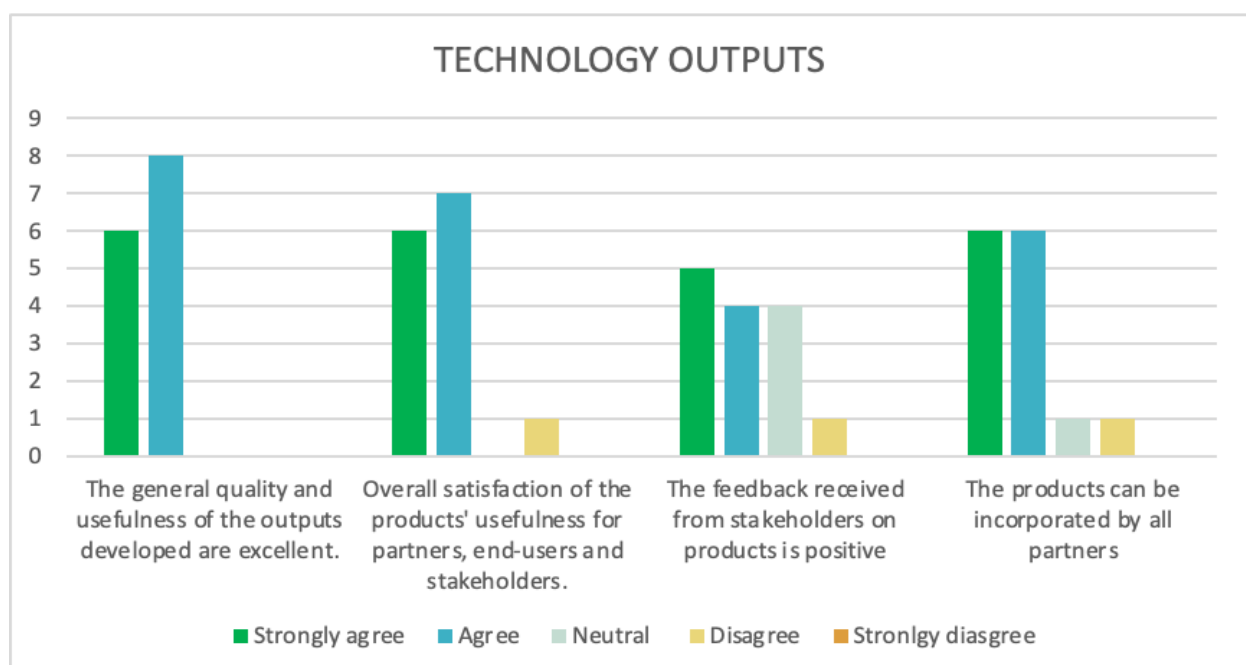
The following survey template was used.

Figure 7: Theme 1 - Technology outputs

From the response, most participants felt the technology outputs were of a high quality and could be purposely used to improve the educational needs of institutions.

Formative and Summative Assessment in Clinical and Basic Health Science Education

Twelve (12), 39 % of participants indicated they were involved in Theme 2: Assessment in HE.

The assessment theme's output was to create a question bank for anatomy and its subspecialities, e.g., histology, osteology, and gross anatomy. The question bank is accessible to all institutions within the Dirsana consortium and hosted by WITS.

All questions were reviewed and edited by an institutional team and reviewed by anatomists from a partner institute. The reviewed questions can now be used in anatomy tests and exams and should yield better performance in validity and reliability than previously set questions from individual lecturers.

Workshops related to assessment were quality-assured through participant surveys.
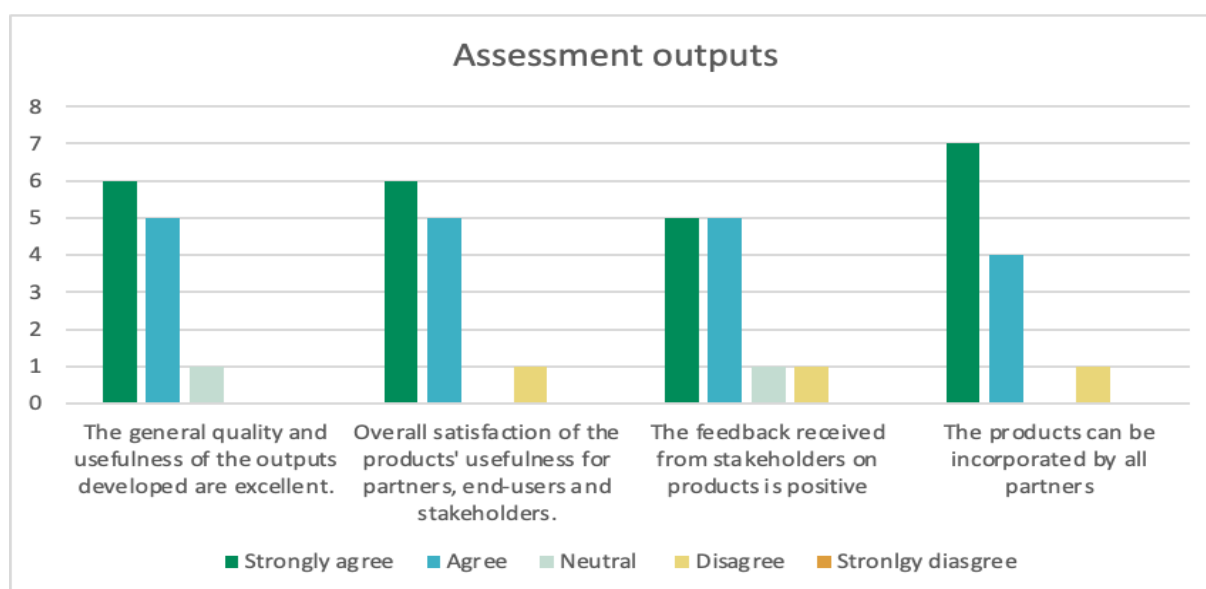
Figure 8: Theme 2 - Assessment outputs

Participants indicated overall satisfaction with the outputs of the assessment theme in HIE. Further support from lecturers in continuously creating, editing and shredding questions will underscore the sustainability of the question bank. Additional memorandum of understanding, between partner institutes, will address the hosting of the question bank and possible cost implications.

Curriculum Development in Medicine, Healthcare and Basic Health Sciences

Six (6)/ 19% of the respondents were involved with curriculum development.

Products created ranged from competency frameworks for pharmacology in dietetics to mapping the UP MBChB curriculum for gaps and areas of improvement to support its revision. New and revised curricula underwent rigorous validation processes from the Health Professions Council of South Africa, institutional faculty, and senate boards.

Several research projects were developed, ethically approved and presented at conferences and workshops in relation to the curricula reviewed and new curricula developed as seen in figure 9.

Figure 9: Curriculum projects
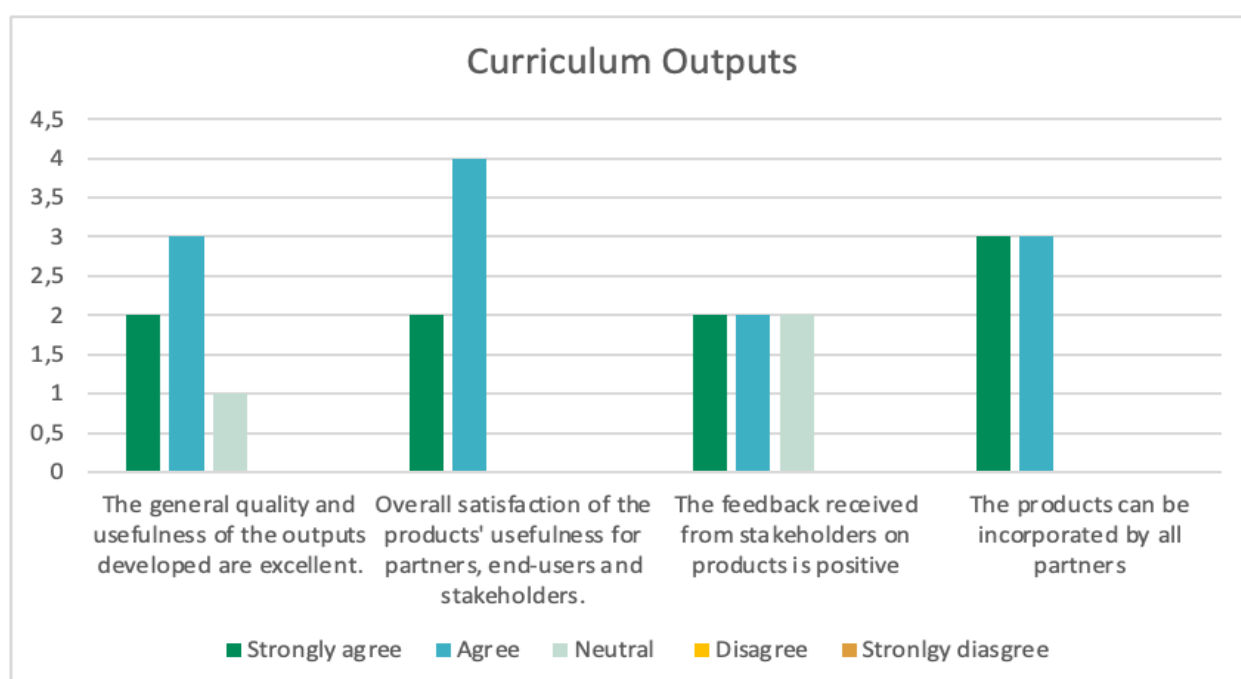
Figure 10: Theme 3 - Curriculum Development outputs

All respondents agreed or strongly agreed (Figure 10) that the products and outputs of the curriculum theme, were fit for purpose and applicable. The acceptance and implementation of the developed curricula indicate stakeholder satisfaction and support the quality of the curricula.

Seven (7)/23% of the respondents were actively involved in the academic literacy theme. Outputs included the establishment of an academic journal for undergraduate research in health sciences. The journal is hosted on the official South African Medical website. Through alliances and networking international reviewers could be sourced which brings the needed expertise to the table.

Workshops for students and reviewers were held, and quality was assured using the Dirisana+ workshop survey. The student's responses to academic literacy sessions hosted by SMU were particularly positive and reported as helpful.

The outputs for this theme were overall seen as useful, however, one participant felt strongly that it cannot be incorporated in their institution as illustrated in figure 11.
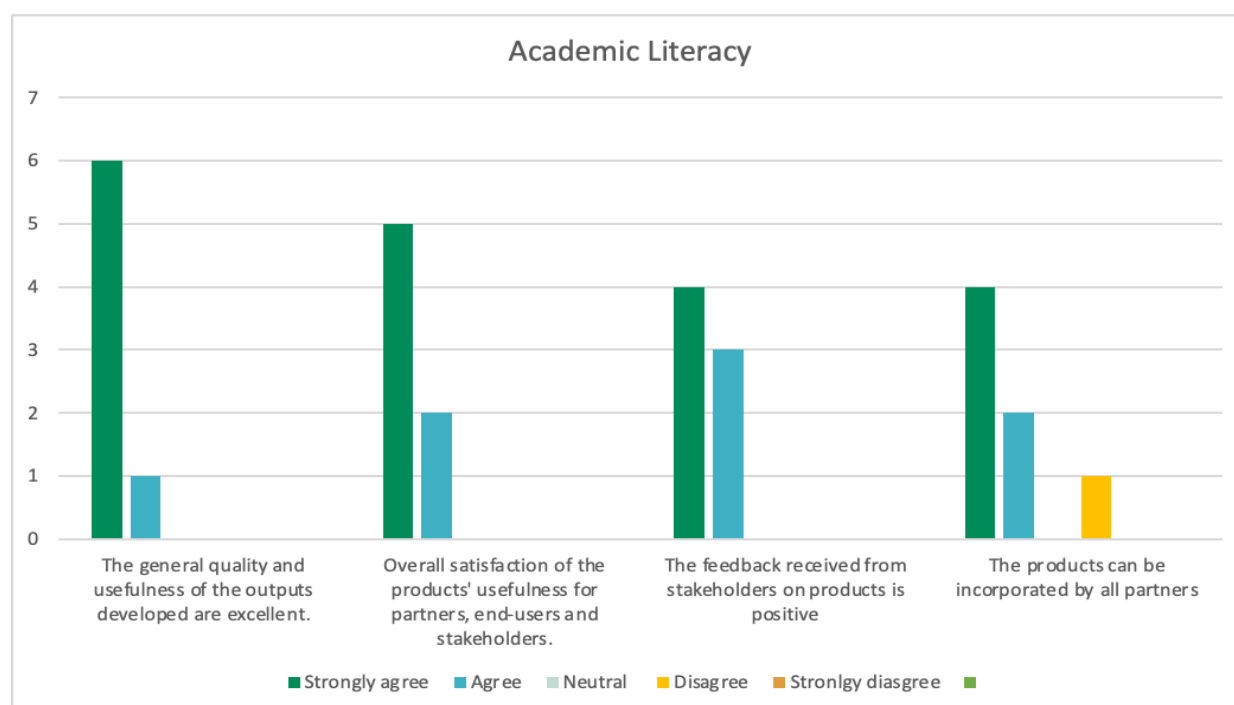
Figure 11: Theme 4 - Academic Literacy outputs

Inter-Professional Education and Collaborative Practice

Six respondents (19%) were involved with the IPECP theme (figure 12).

44. Were you involved in Theme 6: IPECP

31 Responses

● Yes	6
● No	25

Figure 12: Involvement in the IPECP theme

The outputs for the IPE theme (figure 13) were centred around capacity building and enabling personnel and students to work towards integrated professional learning. Workshops and mobilities were quality assured through surveys and reports. Research conducted was ethically approved and disseminated through publications or presentations at conferences.

ID ↑	Name	Responses
1	anonymous	The focus was especially on capacity building
2	anonymous	Involved students in IPECP
3	anonymous	Two workshops Videos of IPECP at various institutions Conference papers Research papers and posters
4	anonymous	Assisted with facilitation of training of the trainers' workshop Facilitator of students' workshop (individual group of 20 to 40 students at a time) Allocation of facilitators to groups of students and venues for the workshops Assisted with communication to students and facilitators via emails, WhatsApp and Blackboard announcements
5	anonymous	Workplace-based student activities and rubrics
6	anonymous	research presentation mobility planning writing of journal article

Figure 13: IPECP outputs

Figure 14 indicates that all respondents perceived the outputs as practical and of value to stakeholders. Capacity building is a subjective entity and the quality of knowledge gained will only be evidenced by future interventions.
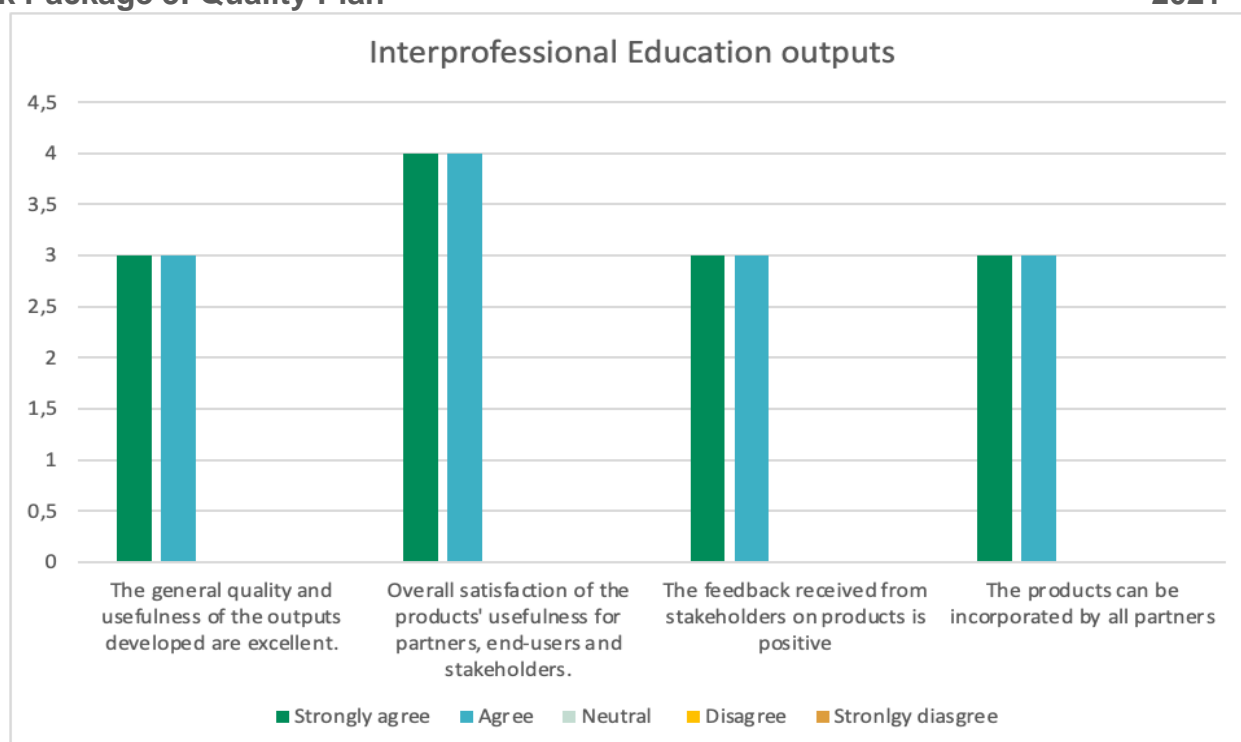
Figure 14: Theme 5 - IPECP value of outputs

Inclusivity and Socio-Cultural Diversity in HPE

Only two respondents indicated their involvement with this theme. The theme also crossed with curriculum development as the development of the diversity training module was the major output of the theme.

Workshops and training of trainers were additional outputs that spoke directly to the module developed for undergraduate health professions students at SMU. Staff trained since 2022 @ SMU: 90+ academic staff members across eleven Health Professions programs 2. 2022: The team trained 250 first-year medical students, updated materials based on feedback.

<u>**Work Package 3**</u>: Quality Plan

As an integral part of the project, a comprehensive quality assurance (QA) plan was developed and implemented to ensure the project's objectives were met and its outputs maintained high standards. This final report outlines the QA plan and the internal and external processes followed to monitor and evaluate the project's activities and outcomes as well as the level of compliance to the EU standards. The University of Namibia together with The University of the Witwatersrand were responsible for this final Quality Assurance report on the overall achievement of the project.

a) <u>Quality Assurance Plan:</u>

The QA plan for the Dirisana+ project focused on three key dimensions:

- <u>Products</u>: Evaluating the quality of physical outputs developed within the project, including teaching materials, assessment tools, and research outputs.

- <u>Process and Project Management</u>: Assessing the effectiveness of project management practices and the implementation of activities.

- <u>Partnership</u>: Reviewing the effectiveness of collaboration between partner institutions.

The plan aimed to uphold key quality characteristics such as reliability, functionality, relevance, timeliness, compliance, and accountability throughout the project's lifecycle.

The internal and external processes that were critical to maintaining quality assurance throughout the project are summarised in table 2.

Table 2: Internal and External Quality Assurance Processes

Quality assurance processes	Internal processes	External processes
Monitoring and Evaluation	Systematic Internal evaluations at predetermined intervals to assess progress against objectives.	Peer reviews and external audits conducted by independent experts to assess compliance and quality
Feedback Mechanisms	Internal feedback systems to gather insights from faculty, staff and students	Engagement with external stakeholders for evaluation
Quality Review Committees	Committees established to review educational materials,	Collaboration with partner institutions to share best practices and insights.

	assessment tools, and teaching strategies	Conference and Ethics peer review processes.
Training and Capacity Building	Ongoing opportunities for staff to attend workshops.	Participation in joint workshops and conferences with external experts to enhance knowledge and skills
Documentation and Reporting	Comprehensive records of all QA activities and regular internal reports to track progress	Regular reporting to the EU detailing project progress, achievements, and challenges.
Risk Management	Identification of potential risks and development of mitigation strategies to ensure project quality	Benchmarking to identify gaps and opportunities for improvement but also to evaluate long-term sustainability of outputs.

Compliance with EU standards throughout the Dirisana+ project was ensured by implementing a comprehensive approach focusing on both procedural and regulatory aspects. The following strategies and processes were adopted as illustrated in figure 15.

Development of a Comprehensive Project Plan

- A detailed project plan was created at the outset, outlining specific goals, objectives, timelines, and a budget that adhered to EU funding guidelines. This plan served as a roadmap for all project activities, ensuring alignment with EU expectations and requirements.

Financial Management Systems

- Robust financial management systems were established to ensure that all funds were allocated and managed in accordance with EU regulations. This included:
- Tracking Expenditures: Implementing systems for monitoring and documenting all financial transactions related to the project.
- Regular Reporting: Providing periodic financial reports to the EU, detailing expenditures and justifying costs against project activities.

Continuous Monitoring and Evaluation

- Regular internal evaluations were conducted to assess compliance with established guidelines and project objectives. This included:
- Progress Assessments: Evaluating the status of project activities against the timeline and objectives outlined in the project plan.
- Feedback Mechanisms: Gathering input from stakeholders, including project partners and beneficiaries, to identify areas for improvement and ensure alignment with EU standards.

External Audits and Peer Reviews

- To validate compliance, external audits were conducted periodically by independent experts. These audits focused on:
- Financial Compliance: Verifying that funds were used appropriately and in accordance with EU regulations.
- Quality Assurance: Assessing the quality of project outputs and processes to ensure they met EU standards.

Training and Capacity Building

- Training sessions were organized for project staff and partners to enhance their understanding of EU compliance requirements. This included:
- Workshops on EU Regulations: Providing information on relevant EU laws, regulations, and best practices to ensure all team members were informed and capable of maintaining compliance.

Documentation and Record Keeping

- Comprehensive documentation was maintained throughout the project, including:
- Meeting Minutes: Recording discussions and decisions made during project meetings to ensure transparency.
- Compliance Records: Keeping detailed records of compliance activities, audits, and evaluations to provide evidence of adherence to EU standards.

Figure 15: Compliance to EU Standards

b) Key Performance Indicators to measure success and effectiveness

Throughout the project several key performance indicators (KPIs) were used to measure success and effectiveness in achieving the overall project goals. These KPIs were designed to assess various dimensions of the project.

- *Attendance of training programmes*: tracked the percentage of staff and students who successfully attended training programmes and workshops, providing insight into the effectiveness of the educational interventions. In all the themes of WP2 staff and students were afforded mobilities to attend workshops and training at partner institution countries.

- *Satisfaction scores*: feedback surveys were collected after each engagement to gauge the level of satisfaction on not only the experience but the relevance of the learning to their own needs. Although mainly applicable for workshops, the interim meetings were also evaluated on this basis.

- *Development of teaching aids*: within the technology theme of WP2, southern African partners UP, WITS, UNAM purchased various 3D printers and scanners for the production of 3D printed models for teaching. The number of teaching aids created, and usability were measures of success.

- *Curriculum alignment*: Within the Curriculum theme of WP2, the programmes that were reviewed were measured and benchmarked against national and international standards of comparable programmes as well as against stakeholder requirements. Findings of the evaluations were included in reporting of decisions related to curriculum updates and presented at conferences. Success indicators were acceptance of reviewers on the suggested changes.

- *IPECP engagement*: a community of practice were established amongst the partner institutions that explored the possibilities of collaborative IPE activities being implemented. Surveys were developed and distributed between the institutions to measure the relevance of the activities for students in health sciences.

- *Assessment Question Bank*: the question bank was created for anatomy MCQ and SAQ. All southern African partners contributed questions and were peer reviewed in working groups before tagged and uploaded to the question bank. Number of questions produced and the usability of the questions are the KPI.

- *Research output*: number of research projects initiated, publications produced, and presentations made at conferences were counted to assess the project's contribution to academic and professional knowledge.

- *Stakeholder feedback*: regular feedback from partner institutions and other stakeholders was collected to gauge the overall impact and effectiveness of the project activities.

- *Sustainability of outputs*: long-term viability of the educational materials and practices implemented was evaluated to determine the potential for continued use.

The perceptions of the southern African partners on the overall quality of the project outputs are shown in figure 16.
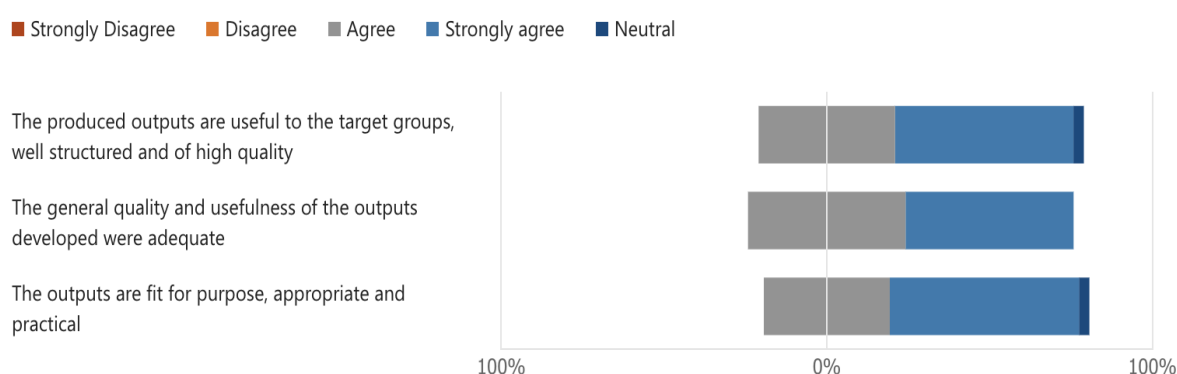
Figure 16: Overall perspective on the quality of the outputs produced

Work Package 4: Dissemination and Exploitation

SMU steered and managed the dissemination and exploitation of the outputs of the projects. Various quality assurance measures were implemented that were appropriate for the type of output and ensured the usability of the end user.

Categories included:

- Dissemination by Social Media platforms

Activities of the consortium were reported on various platforms (LinkedIn, Facebook, X (Twitter), webpage). All posts were proofread and reviewed before being published to ensure compliance with EU and partner requirements.

- Scientific dissemination

Conference proceedings, workshop activities, research activities, publications, and curriculum review fall under scientific dissemination. These activities were externally peer reviewed before accepted. Feedback was also obtained from participants on the usefulness and appropriateness of the workshop to their context.

- Storage, dissemination and exploitation of teaching materials

Question bank, 3D prints, teaching videos, were developed as part of the project. Each output was reviewed using specific criteria (audit tools) to ensure suitability and usability of the product. The storage space or platform were also evaluated for sustainability and durability.

Overall, the dissemination and exploitation scored highly on the quality assurance survey as compliant to the set standards.

<u>Work Package 5:</u> Management

From the quality assurance survey addressed aspects of the management and coordination of the project and reporting processes, of the overall project in its totality and will be reported on next.

a) Management:

- *Overall experience:* The management structure was evident. The consortium members invested extra effort to ensure quality in the deliverables amongst partner institutions. The objectives were innovative and feasible.

- *Different Dates Joined:* Members joined on different dates throughout the grant as the need arose.

- *Strategic planning:* Only some institutions were part of the strategic planning processes.

- *The project management*: Was a transparent process throughout.

- *Quality Assurance:* The level of quality assurance was on point, enabling the project to provide quality teaching material and outputs. The general quality and usefulness of the outputs developed were appropriate.

- *Human Resources:* The roles and responsibilities were clearly outlined and balanced.

b) Reporting:

In Table 3 the feedback received from the participants are reflected on the overall quality of the reporting processes within the project.

Table 3: Feedback on Reporting Quality

Description of activity	Feedback
Adherence to deadlines	The level of adherence to deadlines by all in the consortium was exceptional.
The timetable	The timetable was kept on schedule throughout the grant, and work plan deadlines were met through management steering.
Communication mediums	Google drive, LinkedIn, e-mails, Facebook, Instagram, conferences, website, printed material, WhatsApp
Communication quality	The members experience fluent and timely communication.
Meeting and Agendas	Well-planned agendas and meetings were conducted.

Feedback from Management structure	Feedback from the management structure was timeous and consistent.
Teamwork and collaboration	Teamwork and collaboration were evident in the reporting as ownership was shared.

The overall management of the Dirisana+ project demonstrated a strong commitment to quality assurance, effectively navigating the complexities of a multi-institutional initiative aimed at enhancing health science education in southern Africa. The project management framework was characterized by several key strengths, as highlighted by participant feedback:

1. Effective Communication: The project maintained a high level of communication among partners, which facilitated information exchange and ensured alignment on project goals. The project coordinator played a pivotal role in addressing concerns and maintaining clarity throughout the project's lifecycle.

2. Strong Leadership: Leadership within the project was generally regarded as effective, providing clear direction and motivation for teams. Leaders were proactive in supporting committee members who faced challenges, fostering a collaborative environment.

3. Robust Processes: The project established clear and well-managed processes, which were essential for coordinating activities across various partner institutions. These processes enabled timely achievement of objectives and facilitated efficient project management.

4. Adequate Resources: Participants noted that the project provided sufficient resources, both in terms of financial support and educational materials. This availability of resources contributed to the overall effectiveness of the project.

5. Collaborative Culture: The project fostered a culture of partnership and mutual support among team members, reflecting the values of Ubuntu. This collaborative spirit was crucial for overcoming challenges and achieving project objectives.

6. Compliance with Standards: The project demonstrated good compliance with established guidelines and standards, ensuring that all outputs met quality expectations. Regular peer reviews and assessments helped maintain adherence to these standards.

3. RECOMMENDATIONS AND LESSONS LEARNT

The feedback provided by the participants of the final meeting was positive, but participants' experiences varied on aspects from their own institution to partner institutions and the overall coordination as seen in the comments below:

"Communication was excellent between us and the partner institution in the EU. I think that our component of the project was relatively small, but it ran relatively smoothly (apart from one staff member who did not contribute no matter what we tried). The training received by the participants was excellent and the skills gained have been useful both to them in furthering their careers and to the institution on establishing projects."

"Leadership within the institution was not always clear regarding the change in command. However, these issues were ironed out over time, and clear leadership was advocated. Workforce issues were solved during the later stages of the project by employing research assistants and administrators. As far as my involvement in this project goes, compliance with standards was maintained, given the clear objectives and outputs derived."

"There was a lack of communication between the researchers and management which led to only limited ongoing projects being shared in project manager meetings as it was only the people present who shared their own outputs, rather than an overview of all the activities actually happening… It was inspiring to see some of the project managers take on the role and despite many setbacks rise up to the challenges and help contribute towards the end products of the grant to the best of their abilities, whereas other managers and theme chairs took no responsibility or initiative to work as a team in creating high value outputs. The overall training provided that I experienced was insightful, comprehensive, and efficient and resulted in valuable capacity building. Resources not only purchased but also developed through the grant will continue to provide the institutions with a strong basis for continued capacity building."

"Culture: respectful, inclusive, supportive, UBUNTU being practised."

A follow up question was posed to the participants in the survey on what they would do differently if they are afforded another opportunity to participate in a similar project. Their answers are captured in figure 17:

Have more focused projects and not such a big scope or variety of projects within the bigger project	Planning: have clear objectives and outcomes	Have a clear outline of the roles and responsibilities of the people involved in the projects and associated level of accountability
Find opportunities to collaborate more, not working in silos or on your own project.	Continuous communication - reiterate the goals of the project.	

Figure 17: Considerations for improvement

Based on the feedback and comments from participants of the southern African partners involved in the Dirisana+ project, several key lessons have emerged, along with recommendations for future initiatives. These insights highlight both the successes and areas for improvement within the project's framework.

Lessons learnt:

In Figure 18 the participants' lessons were summarised as 6 main lessons.

- Communication is crucial
- Leadership matters
- Capacity building is essential
- Cultural dynamics impact collaboration
- Resource management is key
- Compliance with standards

Communication is Crucial
- Effective communication was generally noted as a strength, facilitating information exchange between partner institutions. However, there were instances of inadequate communication within some organizations, leading to misunderstandings and a lack of engagement from certain staff members. This variability suggests that establishing clear communication protocols is essential.

Leadership Matters
- Strong leadership was recognized as a driving force in advancing the project. While many leaders provided clear direction and support, some participants noted issues with transparency and preferential treatment. This indicates the need for consistent and equitable leadership practices across all partner institutions.

Capacity Building is Essential
- The training programs offered were well-received and contributed significantly to enhancing staff capabilities. However, there were concerns regarding limited capacity building in some areas, suggesting that more targeted training initiatives could be beneficial.

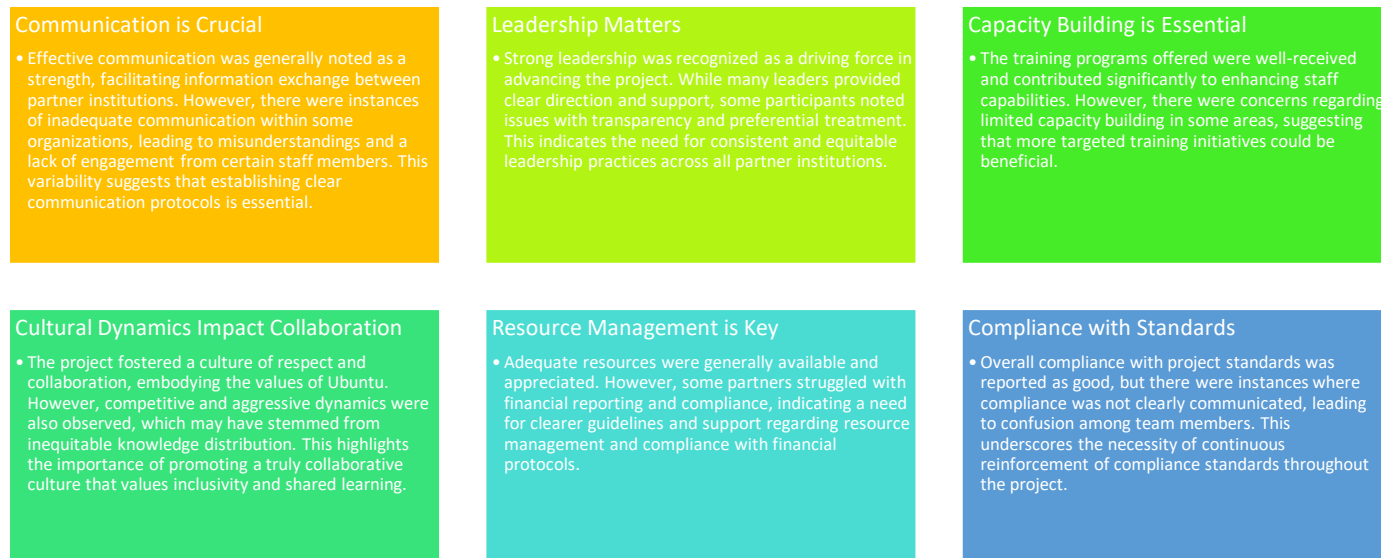**Cultural Dynamics Impact Collaboration**
- The project fostered a culture of respect and collaboration, embodying the values of Ubuntu. However, competitive and aggressive dynamics were also observed, which may have stemmed from inequitable knowledge distribution. This highlights the importance of promoting a truly collaborative culture that values inclusivity and shared learning.

Resource Management is Key
- Adequate resources were generally available and appreciated. However, some partners struggled with financial reporting and compliance, indicating a need for clearer guidelines and support regarding resource management and compliance with financial protocols.

Compliance with Standards
- Overall compliance with project standards was reported as good, but there were instances where compliance was not clearly communicated, leading to confusion among team members. This underscores the necessity of continuous reinforcement of compliance standards throughout the project.

Figure 18: Summary of lesson learnt

Recommendations:

The recommendations that emerged from the final survey based on the participants can be summarised as:

- ***Enhance Communication Protocols:***
  Develop standardized communication protocols, including regular updates and clear channels for sharing information. Consider using tools like calendar invites for meetings to ensure all stakeholders are informed and engaged.

- ***Foster Transparent Leadership:***
  Encourage leadership practices that promote transparency and equity. Implement regular leadership training to ensure that all leaders are equipped to manage diverse teams effectively.

- ***Expand Capacity Building Initiatives:***
  Increase the scope of capacity-building programs to address identified gaps. Tailor training sessions to meet the specific needs of different partner institutions and ensure that all staff members have access to development opportunities.

- ***Cultivate a Collaborative Culture:***
  Promote initiatives that foster a spirit of collaboration and mutual support among project participants. Encourage team-building activities that emphasize shared goals and collective success.

- ***Strengthen Resource Management Training:***
  Provide additional training on financial management and compliance to ensure all partners understand the reporting requirements. Develop clear guidelines and support systems to assist partners in adhering to financial protocols.

- ***Reinforce Compliance Communication:***
  Regularly communicate compliance standards and expectations to all project participants. Utilize workshops and training sessions to clarify compliance processes and address any uncertainties.

4. CONCLUSION

The Dirisana+ project has successfully fulfilled its objectives of enhancing health science education in southern Africa through a comprehensive quality assurance framework. This report has outlined the rigorous internal and external quality assurance processes implemented throughout the project, ensuring that all activities and outputs met high standards of reliability, functionality, relevance, timeliness, compliance, and accountability.

By focusing on the key dimensions of products, process and project management, and partnership, the project has effectively assessed the quality of its educational offerings and the collaborative efforts among partner institutions. The integration of innovative training programs and research opportunities has empowered faculty and students alike, equipping them with the skills necessary to address the diverse health needs of their communities.

The application of specific quality characteristics has ensured that the project outputs are not only relevant and functional but also sustainable in the long term. The collaborative approach fostered among the consortium members has facilitated the sharing of best practices and resources, enhancing the overall impact of the project.

As we conclude this report, it is essential to acknowledge the valuable lessons learned throughout the project lifecycle. The insights gained from monitoring and evaluation activities will inform future initiatives and contribute to the continuous improvement of health science education in the region. The commitment to maintaining high-quality standards and fostering strong partnerships will be crucial as the Dirisana+ project moves forward, ensuring that its achievements continue to resonate within the educational landscape of southern Africa.

In summary, the Dirisana+ project stands as a testament to the power of collaborative efforts in capacity building, demonstrating that through commitment, innovation, and rigorous quality assurance, we can significantly enhance educational outcomes and ultimately improve healthcare delivery in resource-constrained environments.