SCHOOL OF DENTAL CARE PROFESSIONALS (SDCP)

DOW UNIVERSITY OF HEALTH SCIENCES

STRATEGIC PLAN
(2024 – 2027)

Pioneering Excellence | Inspiring Innovation

To Heal | To Educate | To Discover

بِسْمِ اللهِ الرَّحْمَنِ الرَّحِيمِ

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PRINCIPAL'S MESSAGE

Health care systems not only depend on the infrastructure but also the human resources with varying degrees of functions and periods of training; all working together in a team to provide patient care. In the context of the dental health care system, an auxiliary is a "person who works in a team with the dentist in patient treatment". They may be Operating Auxiliary, such as Dental Laboratory Technologists or Non-Operating, such as Dental Hygienists. I am privileged to be part of the Dow University of Health Sciences team to carry out the vision of providing outstanding patient-centered education, training, and clinical care through our well-structured dental auxiliary degree programs. This is all possible under the dynamic guidance and supervision of our Honorable Vice Chancellor, Prof. Dr Muhammad Saeed Quraishy. We have an excellent team of instructors, qualified dental hygienists, and technologists who have developed the skills of being all-rounder in student teaching and patient care; and conducting, managing, and coordinating other necessary activities such as research and community-based dental services. I hope the School of Dental Care Professionals will flourish further and shortly, we may be able to start master-level programs in the fields of dental hygiene and dental technology.

(Prof. Dr. Ambrina Qureshi)

Principal SDCP-DUHS

EXECUTIVE SUMMARY:

For those who are not aware of the historical background of the Dental Care Professionals (DCPs), we would like to walk them through it. LORD NUFFIELD! You all must know about this "Action Man if ever there was, with characteristic foresight and public spiritedness, who brought a major revolution in the British Healthcare system that is very close to the existing healthcare system of Pakistan. We won't go very far but start with the Nuffield Inquiry Report presented in 1993, almost three decades ago. It was then that Nuffield illuminated a bold vision for transforming dental care through the strategic integration of DCPs as a result of a growing mismatch between the dental workforce structure and public dental demands. The term Dental Assistants (DAs) was obsoleted by the British healthcare system in 2008. In 2013, the GDC allowed patients direct access to DCPs without a dentist's referral, reflecting increased trust in their competencies.

The DCP programs, including Dental Hygiene and Dental Technology, were among the first undergraduate degree programs that were launched by the Dow University of Health Sciences after it was chartered with the status of being a university in 2004. These programs were initially launched as Diploma programs, which later in 2009 were upgraded to bachelor's degree programs by the **School of Dental Care Professionals (SDCP)** with a mission of becoming a leader in oral health education and patient care in Pakistan with a strong emphasis on community-based prevention.

Since its inception, SDCP has remained committed to continuous improvement. It was the **first institution in Pakistan** to introduce four-year bachelor programs for dental auxiliaries, reflecting its forward-thinking vision. Regular self-assessment reports (SARs), submitted to the **Quality Enhancement Cell (QEC)** of the **Dow University of Health Sciences (DUHS)**, have ensured alignment with the **Higher Education Commission (HEC)** requirements and strengthened the strategic integration of SDCP with other DUHS entities, such as the **Dow Institute of Medical Technology (DIMT)** and **DIKIOHS**.

In 2018, the adoption of the Strategic Plan of DUHS formalized SDCP's mandate to document its five-year achievements and outline its vision for the future. This report highlights progress in key areas, such as:

1. Training & Education
2. Research & Innovation
3. Patientcare & Community Services
4. Others, including Resource Management & Coordination System

ABOUT THE SCHOOL

Sir Hugh Dow established Dow Medical College (DMC) in 1945. Until 2004, it only offered an M.B.B.S. degree that was awarded by the University of Karachi. However, in 2004, the Legislature of Sindh through an ACT established Dow University of Health Sciences (DUHS) with Dow Medical College, Sindh Medical College, and Ojha Institute of Chest Diseases as its constituent entities. At present, the University has over 4,000 faculty and staff, serving over 9,100 male and female students on two campuses. DUHS today is the harbinger of a new dawn of education, research, and clinical care in this region and beyond. It now has 49 colleges, schools, institutes, and other academic and non-academic entities on two (2) campuses:

- DMC campus

- OJHA campus

DUHS has the following Deanships, which provide the leadership and oversight of critical areas in the University:

- Dean, Faculty of Surgery & Allied

- Dean. Faculty of Medicine & Allied

- Dean, Faculty of Dentistry

- Dean, Faculty of Pharmaceutical Sciences

In 2006, a dental institute was established with a vision of becoming a leader in oral health education and patient care in Pakistan with a strong emphasis on community-based prevention. Among its pioneering initiatives was the launch of diploma programs aimed at enhancing the capacity of dental auxiliaries. Later, recognizing the need for advancing training, DIKIOHS created a new entity in 2007, the **School of Dental Care Professionals (SDCP)**, to manage and upgrade these diploma programs to bachelor's degree programs.

In 2009, SDCP successfully enrolled its first cohorts of **Bachelor of Science (BS)** programs in Dental Hygiene and Dental Technology. The inaugural batches graduated in 2013, setting a benchmark for producing competent professionals equipped for both national and international markets.

Since its inception, SDCP has remained committed to continuous improvement. It was the **first institution in Pakistan** to introduce four-year bachelor programs for dental auxiliaries, reflecting its forward-thinking vision. Regular self-assessment reports (SARs), submitted to the **Quality Enhancement Cell (QEC)** of the **Dow University of Health Sciences (DUHS)**, have ensured alignment with the **Higher Education Commission (HEC)** requirements and strengthened the strategic integration of SDCP with other DUHS entities, such as the **Dow Institute of Medical Technology (DIMT)** and **DIKIOHS**.

INTRODUCTION & OVERVIEW

Under the leadership of the **Dow University of Health Sciences**, the School of Dental Care Professionals has since its inception been at the forefront of transforming oral healthcare through education, innovation, and community-focused solutions. This school has remained committed to producing a workforce capable of shaping the future of dentistry in Pakistan and beyond, addressing workforce shortages, and raising the standards of care through excellence and innovation.

The School of Dental Care Professionals is the pioneer center of Pakistan that offers four-year BS degree programs in the two main fields of dental auxiliary, namely Dental Hygiene and Dental Technology. These programs come under the domain of Allied Medical and Health Sciences and are administered in collaboration with the Dental Faculty of the Dow University of Health Sciences. These programs cover not only the structured coursework spread over four years, but also training pertinent to pre-clinical and para-clinical dental practice along with an additional one-year mandatory internship in different dental departments of Dow University of Health Sciences. It took over a decade for other institutions in Pakistan to follow SDCP's lead in converting their diploma and certificate programs into bachelor-level degrees. Despite these advances, challenges persist – most notably, the lack of formal registration for dental auxiliaries to practice as allied health professionals in Pakistan.

Just like, it took the National Health Services of the United Kingdom almost 15 years through the "Journey of Acceptance" to start regulating DCPs with added skills and responsibilities through the General Dental Council (GDC), it took almost the same time for the Dow University of Health Sciences to get Dental Technology and later the Dental Hygiene program certified as allied health professional disciplines by the Ministry of National Health Services Regulations and Coordination of Pakistan. This was all possible only after the passing of the **Council of Allied Health Sciences Bill (2020)**, but the consistent and perseverant efforts of the School of Dental Care Professionals of DUHS that these two disciplines are now recognized in Pakistan as practices of allied dental healthcare professionals.

GOVERNMENT OF PAKISTAN
Ministry of National Health Services Regulations & Coordination
ALLIED HEALTH PROFESSIONALS COUNCIL
Ex. PAKISTAN HEALTH RESEARCH COUNCIL, BUILDING
Shahrah- e- Jamhuriat, off. Constitution Avenue, Sector G-5/2, Islamabad
Ph: (051)9216791; 9207367; 9207386 Ext. 20

Certificate for Institute

AHPC Registration No: __130058__

Name of Institute/University: __DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI__

Campus Address: __ADMIN BLOCK, DMC CAMPUS, DUHS, BABA-E-URDU ROAD, KARACHI-74200__

The Institute / University is Registered / Recognized provisionally for one year

for _____ **BS/Doctor of Physical Therapy** _____

In the following Disciplines:

1. Medical Laboratory Technology	2. Surgical Technology, including operating room Technology	3. Cardiac care Technology including cardiac surgery, perfusion technology etc.
4. Dental Technology	5. Optometry and Refraction Technology	6. Physiotherapy, including Orthotics and Prosthetics, rehabilitation
7. Ophthalmic Technology	8. Radiography & Imaging Technology	9. Respiratory Therapy including pulmonary function testing
10. Psychology and counseling	11. Nutrition	

Valid Upto: __19-Feb-2025__

Checked By
Deputy Director (Q A)

Issued By
Secretary AHPC

GOVERNMENT OF PAKISTAN
ALLIED HEALTH PROFESSIONALS COUNCIL
Ex. PHRC Building, Opp. Radio Pakistan, Shahrah-e-Jamhuriat,
Sector G-5/2, Islamabad. Ph: (051)9216791, 920736/: 9207386 Ext. 20
Email: admnahpc@gmail.com   website: www.ahpc.org.pk

F.No.32/Inclusion of Disciplines/AHPC/2024/ **543**

Date: May 2nd, 2024

Subject: **Requests for Inclusion disciplines in Schedule-I of AHPC Act.**

Reference you request on the subject cited above. It is to inform you that your requests for addition of disciplines was presented to the 2nd meeting of the Sub-committee held on March 05-06, 2024. The following decisions of the committee for your kind information.

S. #	Disciplines request	Decision
1	Forensic science and Toxicology	The committee agreed in general but asked for curriculum and supportive document
2	BS Cardiology Technology BS Cardiac Perfusion Technology BS Cardiovascular technology	Agreed to add
3	BS Dental Hygiene	Agreed to add
4	BS Urology	Request Decline
5	BS Optometry Technology	Agreed to add
6	EEG technology should be changed to Neurophysiology technology (EEG, NCS, EMG)	Agreed to add
7	Human Nutrition and Dietetics'	Agreed to add
8	Diabetic Foot Care Assistant Course Diabetes Foot care technical course diploma in diabetes education	Documents in detail (eligibility criteria, affiliation, duration of course, curriculum) may be provided
9	BS Emergency and Intensive Care Technology	Already included in emergency clinical medicine technology
10	Traditional Chinese medicine and acupuncture	Request decline
11	Acupuncture	Request decline
12	Health Technology	Already included in Primary health care technology
13	Physiotherapy including orthotics and Prosthetics, rehabilitation	May be changed to i. Physiotherapy and rehabilitation ii. Orthotics and Prosthetics
14	Environmental Health Climate change and sustainable development	Request decline
15	Medical entomology and disease vector control	Documents in detail (eligibility criteria, affiliation, duration of course, curriculum) may be provided
16	BS Radiology Technology	Already added in Radiography and Imaging technology

Dr. Ibrar Rafique
Secretary

WHO ARE DENTAL HYGIENISTS?

Dental Hygienists are the primary dental healthcare professionals. They are trained to perform the primary periodontal and dental procedures both in the communities and on the chair side. Such procedures include periodic dental examination and screenings, scaling and root planning, tooth polishing, pit, and fissure sealants, atraumatic restorative treatment using hand instrumentations, fluoride applications in high-risk caries children, and other non-invasive dental procedures that do not require anesthesia, needles, and sharp instrumentations. The students of dental hygiene are taught all the dental auxiliary procedures including patient record keeping, reception management, patient history taking, communication skills, oral hygiene instructions, health education and promotion skills, non-surgical periodontal therapy, dental radiography, sterilization and infection control in dentistry and bio-hazard management. The students of dental hygiene in their third and final years can assess patients' conditions to offer patient-specific preventive and evidence-based educational services to promote and maintain good oral health both in dental clinics and in communities using mobile dental services/ units. They are eligible to independently work in any form of para-dental practice, outreach community dental, and clinical preventive services. They can also work in coordination with specialist dental surgeons and under supervision can perform non-invasive basic clinical procedures.
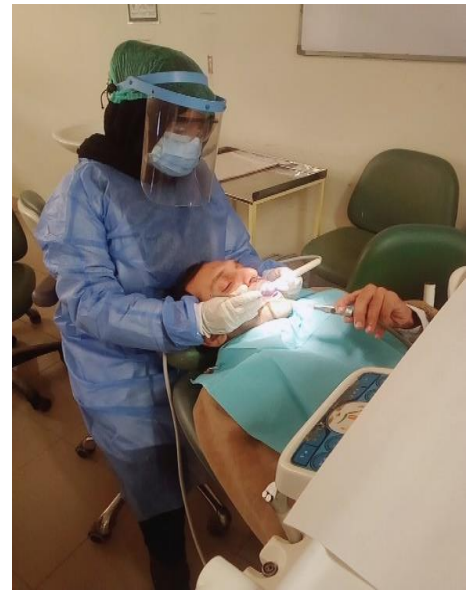
WHO ARE DENTAL TECHNOLOGISTS?

Dental Technologists are trained craftsmen who work with precision, great concentration, and patience, with a high standard of hand skills. As a member of the dental health team, dental technologists provide services to dentists by constructing for them a variety of appliances to repair, replace, or reposition teeth of patients whose natural teeth are broken, missing, or need repositioning. The program provides theoretical and technical training for the construction of these dental appliances along with the clinical orientation of the student. Courses in specialized techniques are presented to students in the laboratory, clinical rotations, demonstration, and lecture classes. Practical laboratory work is emphasized in the courses to prepare the student for employment.

Few glimpses of successful projects and practices during the 1st Phase of DUHS Strategic Plan (2019 – 2023)

(a) Four-Handed Chairside Dental Practice

(b) Community-Based Dental Practice

(c) Civic-Engagement through Youth Participation Program

(d) Dental Prosthesis Fabrication in Dental Laboratory

Key Achievements of SDCP-DUHS in the Last Five Years (2019 – 2023)

Like any other entity of the Dow University of Health Sciences, the School of Dental Care Professionals has also been monitoring its progress and accomplishments under the four main domains, namely Education & Training, Research & Innovation, Quality patient care, and Community Services.

Figure 1: Missions of Dow University of Health Sciences

Pillar – 1   Education & Training

To enhance education and training in DCP programs, the Dow University of Health Sciences approved the SDCP to form its own dedicated Curriculum Review Committee (CRC) and a Board of Studies (BOS) in 2021. Identified gaps in the research-based courses led to the introduction of "Research and Evidence-Based Learning" and "Biostatistics" in the second year of the programs, preparing graduates to provide ethically sound, evidence-based preventive and therapeutic care both chairside and in communities. While the revised curriculum aligns with HEC's 2023 guidelines, it lacks AI-powered tools, AR/VR-based training, and modules on digital dentistry. Moving forward, the curriculum aims to incorporate emerging technologies such as AI-driven simulators, 3D printing, CAD/CAM technologies, and interactive AR/VR training to enhance learning outcomes and global competitiveness.

Pillar – 2   Research and Innovation

Only the first two batches enrolled in B.S-DCP Programs were introduced to the course in research methods by the faculty of Community Dentistry. As a result, these students presented their research projects at local scientific conferences. A group of 6 students of these batches led by Anum Khurshid won a research award at the 6th DUHS Annual Dental Symposium held in 2012. Subsequently, research and innovation were not considered important for DCP programs. However, one intra-departmental poster competition was held in 2015, and one innovative project known as the "digital toothpaste dispenser" was presented by a group of DCP Dental Hygiene students led by Iqra Hussain in 2018, DUHS-DICE organized by the ORIC-DUHS.

Figure: *Digital Toothpaste Dispenser – an innovative idea presented in the 2018 DICE-DUHS*

The Department of Community Dentistry has formally integrated evidence-based dentistry and research into the curricula for dental hygiene and dental technology while introducing a Monthly Journal Club for instructors to enhance their engagement with scientific and updated literature and global case studies. Although the new curriculum includes Capstone Project hours for the students, it lacks their active approach towards seeking and building partnerships with industry leaders and interdisciplinary research on digital oral health solutions like AI-based diagnostics, mHealth, and tele-dentistry. Research in these areas could enhance students' understanding of innovative oral healthcare approaches for underserved populations. Additionally, global partnerships for student exchange programs through DUHS's global engagement department could further improve program outcomes.

Since there are no postgraduate opportunities for the DCPs in Pakistan in their field where they can pursue their expertise, they get themselves enrolled in other postgraduate programs like MBA, MPH, and M. Phil in Basic Medical Sciences such as Physiology, Pharmacology, Microbiology, Molecular Biology, and Genetics. Those who are enrolled in postgraduate programs in Pakistan or abroad are pursuing research, and others who do not get this opportunity limit themselves to Dental Assistance.

Pillar – 3   Patient Care

The para-clinical role of dental auxiliaries is ineffective without a commitment to quality and patient-centered care. Currently, SDCP collaborates with DUHS dental clinics to provide four-handed care; however, this care is unsustainable without secure and auditable patient record management. The lack of permanent dental records at Dow University Dental Hospitals highlights the need for blockchain technology, which distributes records across a decentralized network, ensuring real-time, secure, and auditable data management. Incorporating blockchain integrated with AI-driven diagnostic tools could enhance care quality and comply with HIPAA privacy standards, an initiative SDCP could lead in the future.

Pillar – 4   Community Services

The purpose of dental auxiliaries loses significance without a commitment to community-based dental services. SDCP, in collaboration with the Department of Community Dentistry, has sustained Community Dental Outreach Services for over 15 years, targeting schools, rural communities, and disadvantaged areas. This program follows a three-phase model: **Situation Analysis**, where oral health needs are assessed; **Tailor-made Health Promotion**, focusing on evidence-based education and prevention; and **Evaluation**, which re-assesses oral health after interventions. However, to optimize these efforts, integrating blockchain technology could securely store and transmit patient data from mobile clinics, ensuring continuity of care. Additionally, implementing tele-dentistry for remote consultations and follow-ups could significantly enhance outreach, making community dental services more effective and sustainable.

ORGANIZATIONAL STRUCTURE OF THE SCHOOL OF DENTAL CARE PROFESSIONALS

The organizational structure of the SDCP can be seen below. Where, like any other independent entity of DUHS, the SDCP is also headed by a Principal and a Vice Principal. Since in the Pakistani scenario, the DCPs cannot practice independently, unlike other parts of the globe like the UK and Canada, the DCPs work only under the supervision of Senior Dentists. Therefore, SDCP utilizes the shared services of the senior dental faculty of DIKIOHS to supervise the basic and clinical courses of Dental Hygiene and Dental Technology. Whereas the instructors and other staff for the DCP programs are hired by the SDCP.
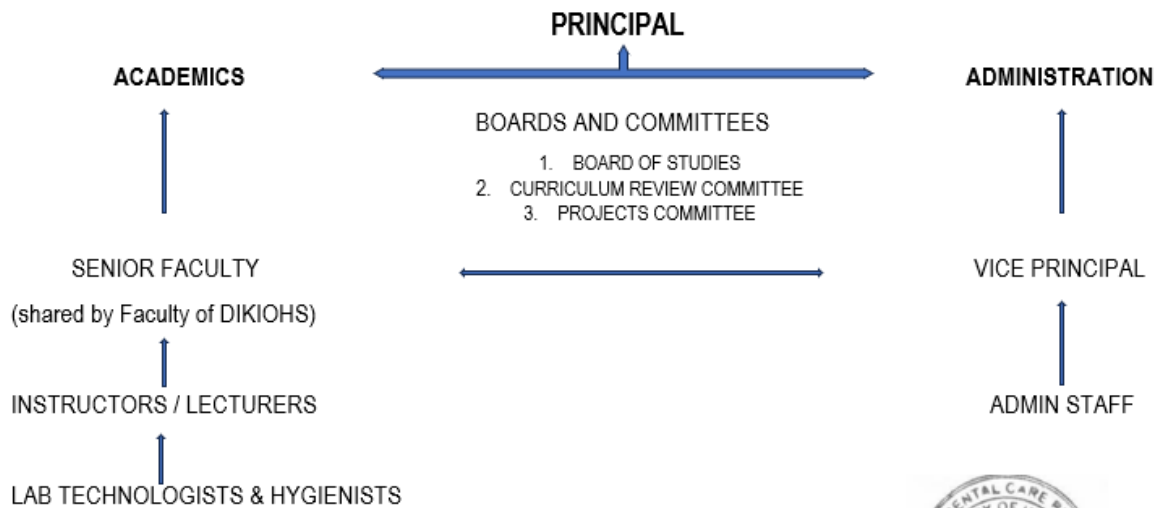
Now since the establishment of a separate Council for Allied Health Professionals in Pakistan, and the recognition of Dental Hygienists and Dental Technologists, we are now hopeful that like other parts of the world, the DCPs will be allowed to independently practice in their respective fields according to their competencies; and therefore, expansion in capacity is expected in near future in terms of more senior Dental Hygienists and Dental Technologists to be hired at faculty positions.

SCHOOL OF DENTAL CARE PROFESSIONALS (OJHA CAMPUS)
DOW UNIVERSITY OF HEALTH SCIENCES KARACHI

Ref. No.: ORGANOGRAM-SDCP/DUHS/

ORGANOGRAM OF SCHOOL OF DENTAL CARE PROFESSIONALS – DOW UNIVERSITY OF HEALTH SCIENCES

PRINCIPAL

ACADEMICS

ADMINISTRATION

BOARDS AND COMMITTEES

1. BOARD OF STUDIES
2. CURRICULUM REVIEW COMMITTEE
3. PROJECTS COMMITTEE

SENIOR FACULTY

(shared by Faculty of DIKIOHS)

VICE PRINCIPAL

INSTRUCTORS / LECTURERS

ADMIN STAFF
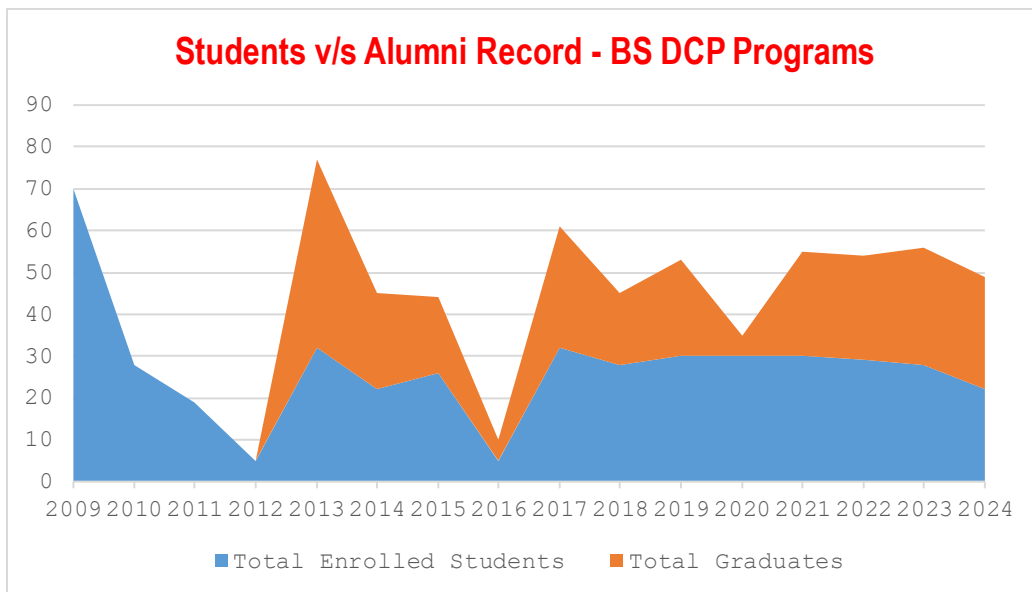
LAB TECHNOLOGISTS & HYGIENISTS

_____
(Signature and date)
Prof. Dr. Ambrina Qureshi
Principal SDCP-DUHS

(Official Seal)

Comparing past statistics with the current statistics and the Key Highlights

Over the last few years, overall stability has been observed in the admission trend in DCP programs, both in BS Dental Technology as well as in the BS Dental Hygiene program.
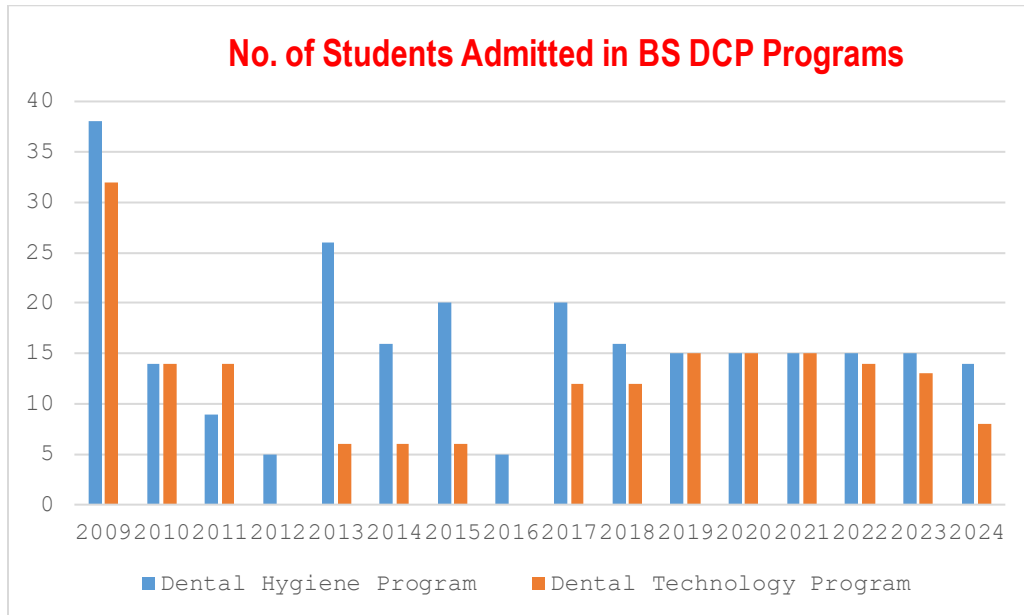
As a result, there is stability in the production of graduates that will further help us in the employment prediction of our graduates in the national and international markets. So far, we have limited data on our graduates (Dental Technologists, n=152 and Dental Hygienists, n=74) employment and placements as can be seen in the figure below.

Legend: ☐ Dental Hygienists ☐ Dental Technologists
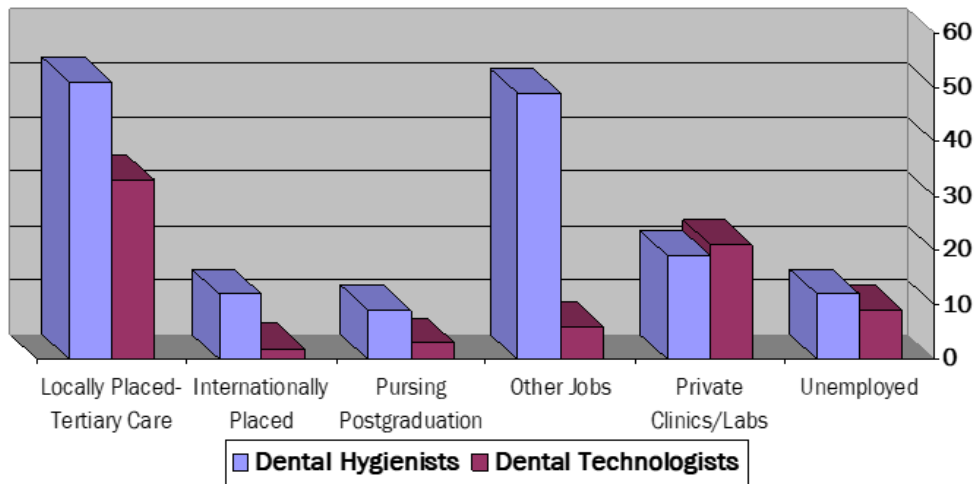
As for the current workforce trend in the SDCP, we have observed that although the workforce trend in SDCP has gone down to last year, this shows our focus is more on retaining quality facilitators than numbers.

Workforce Trend in DCP Programs

Legend: ☐ Dental Hygiene Workforce ☐ Dental Technology Workforce
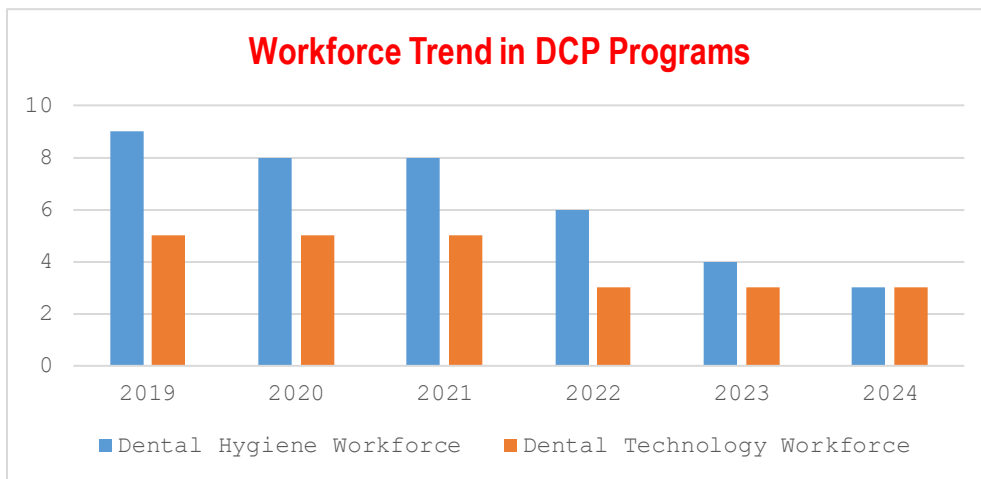
To improve on our programs' qualities, we are focused more on our teachers' on-the-job training and development, particularly lately in "digital technology".

Faculty Training Workshops

Legend: ☐ Teaching ☐ Practice ☐ Research ☐ Digital Technology
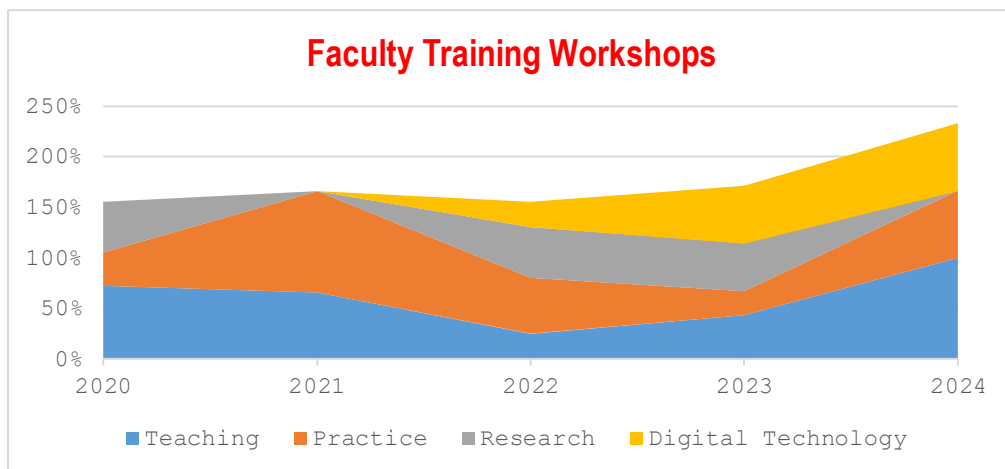
SECTION I: OVERVIEW OF THE STRATEGIC PLANNING PROCESS

The SDCP presented its first working draft of the strategic plan in 2019, and since then, it has evolved. Initially, with less focused goals, the SDCP has now evolved with more focused and well-organized goals and objectives that are achievable with dedication and teamwork.

Figure-2

Concerning teamwork, the SDCP has been more realistic in expressing the concern that the team's motivation is not achieved overnight. Continuous reinforcement and reminders are required. Especially when the team is smaller in size, all tasks are done by the same people in the team. This may delay in achieving goals and at times a feeling of "burn-out", but when achieved gives loads of satisfaction and encouragement to do even better.

The first S.W.O.T. analysis performed by us helped us identify the areas where we can use our strengths as an opportunity to work on our weaknesses and encounter threats on footings.

Our process started with the establishment of our own independent Board of Studies and Curriculum Review Committee that helped us streamline the program outlines and develop pertinent graduate competencies for Dental Hygienists and Dental Technologists. Primarily we have aimed to gain pre-eminence in education and training; select areas of research and innovation; and deliver world-class para-clinical and primary care with local, regional, and global impact. To accomplish these objectives and to use available resources most judiciously, the strategic goals were mainly built on the four important pillars which are seen in Figure 2.

SECTION II: VISION, MISSION & VALUES

VISION

To be a pre-eminent academic institution committed to changing and saving lives.

MISSION

Providing outstanding patient-centered education, training, and clinical care informed by cutting-edge research and innovation, generating and disseminating new knowledge.
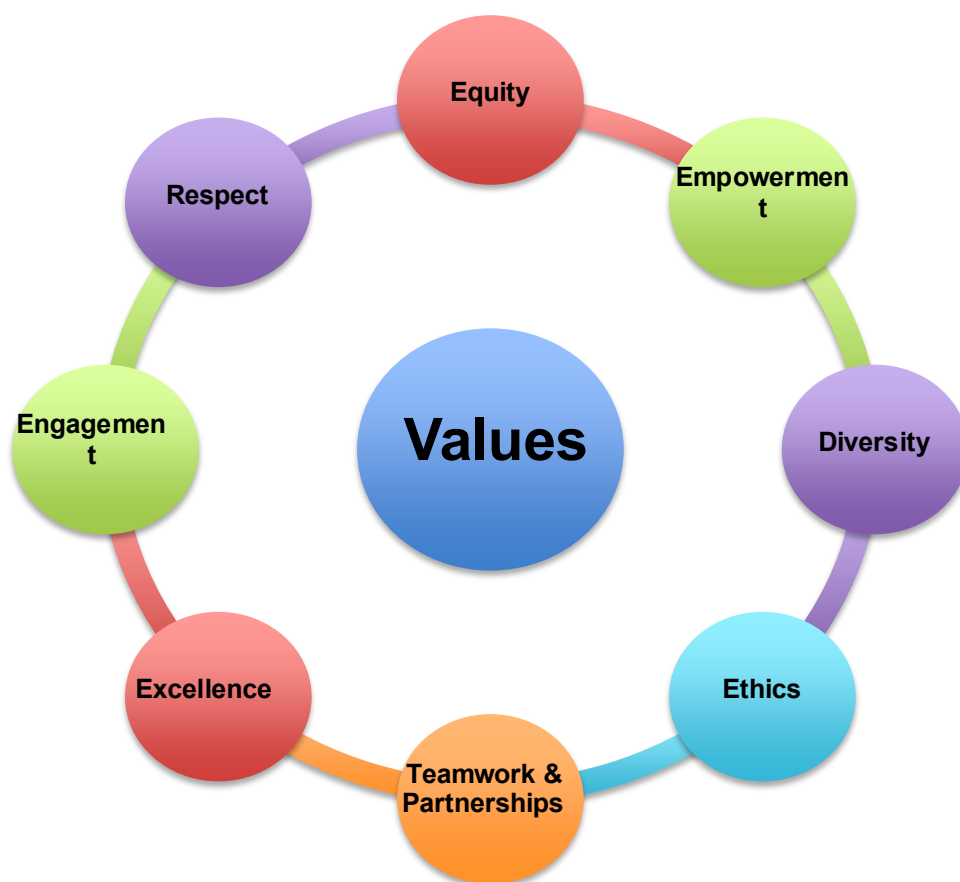
VALUES:

- Customer Service

  Put patients & students first.

- Empathy & Compassion

  Understand before you judge.
  Be concerned for the sufferings & misfortunes of others.

- Excellence

Be the best and commit to exceptional quality and service.

- Innovation

Encourage curiosity, imagine, create, and share.

- Teamwork

Engage & collaborate.

- Integrity & Leadership

Be a role model and influence others to achieve their best. Have the courage to do the right thing.

Hold yourself and others accountable.

- Respect & Collegiality

Be kind.

Listen to understand.

Value different opinions.

STATEMENT OF PURPOSE

"The School of Dental Care Professionals of Dow University of Health Sciences is committed to advancing dental allied health education, research, and clinical practice through innovation, digital integration, and interdisciplinary collaboration to enhance patient care and address oral health disparities"

SECTION III: ASPIRATIONAL INSTITUTIONS

Following the DUHS vision, mission, core values, and strategic goals, the School of Dental Care Professionals aspires to foster excellence in oral healthcare by adopting oral healthcare solutions that are digitally integrated and powered by artificial intelligence (AI) in global dental auxiliary education; and therefore, moving further with what we may call **"six-handed dental healthcare"** rather than "four-handed dentistry" that we had previously adopted successfully.

Looking forward, SDCP envisions expanding its offerings to include master-level programs in Dental Hygiene and Dental Technology, further strengthening its leadership in this field. These programs will equip graduates with advanced knowledge and skills, making them competitive on a global scale while addressing critical workforce shortages in Pakistan and all over the world. Globally, universities are offering master's level programs in Digital Dental Technology such as the University of Greater Manchester, that provide opportunities to develop skills using digital dental systems to manufacture appliances in fixed prosthodontics, removable prosthodontics, and orthodontics. This supports further knowledge of how digital solutions can assist with advanced techniques, including dental implants. In addition, this helps build independent businesses and transferable skills, ready to take on leadership and management roles or run a commercial dental laboratory. Similarly, the Dental Hygiene domain can be further advanced into Expanded Function Dental Auxiliary support for the existing dental teams functioning in the UK and Canada, independent in primary dental care clinics and preventive dental care services.

For this, the SDCP aspires to achieve **Global Benchmarking and Future Outlook** and therefore, is committed to aligning its educational and clinical practices with international standards set by the **Commission for Dental Accreditation (CODA)** in the USA guided by **American Accreditation Association (AAA)**, **Canadian Dental Hygienist Association** and the **General Dental Council (GDC)** in the UK. By integrating emerging technologies such as AI, tele-dentistry, and digital dental simulation, SDCP aims to enhance its training programs and redefine patient care.

SECTION IV: STRATEGIC GOALS

Through the integration of cutting-edge technologies such as AI, augmented and virtual reality (AR/VR), and blockchain, we aim to revolutionize dental education and practice. SDCP emphasizes interdisciplinary research, fostering global collaborations, and expanding to outreach and underserved populations, ensuring equitable access to high-quality oral healthcare.

The over-arching strategic goals and objectives for a 3-Year Strategic Plan (2024–2027) of the School of Dental Care Professionals are:

Goal 1:   **Revolutionize dental allied health education, research, and innovation by embedding emerging digital technologies.**

Objective 1: Reforms in BS-DCP programs' curricular content by introducing emerging digital dental technologies by 2025
Objective 2: Launch interdisciplinary research projects on digital dentistry innovation, secure funding, and disseminate results by 2026.
Objective 3: Initiate integrated digital technology with chair-side, laboratory, and outreach community practices for patient care and underserved populations by 2026.
Objective 4: Launch a postgraduate program for Dental Care Professionals by 2027.

Goal 2:   **Expand global partnerships and community engagement to impact oral health disparities.:**

Objective 1: Strengthen community engagement and partnership with government and non-government organizations and industries for sustainable oral health interventions by 2025.
Objective 2: Equip mobile dental health solutions for underserved communities by 2026.
Objective 3: Increase utilization of blockchain technology and digital patient record management by 2026.

Goal 3:   **Invest in advanced infrastructure and capacity development to ensure sustainable institutional growth.**

Objective 1: Launch Short Courses and Workshops for Human Resource and Capacity Development, preferably in Digital Dental Technology 2026.
Objective 2: Ensure the dental healthcare system is staffed with allied dental health professionals / DCPs by 2026.
Objective 3: Align SDCP infrastructure and programs with international accreditation standards by 2027.
Objective 4: Build a commercially viable dental laboratory equipped with CAD / CAM and Digital 3-D Printing by 2027.

OBJECTIVES, OKRs & KPIs

Goal 1: Revolutionize dental allied health education, research and innovation by embedding emerging digital technologies.

Goal Statement: Revolutionize dental allied health education, research, and innovation by embedding emerging digital dental technologies to enhance patient care and outreach community services and contribute to achieving Sustainable Development Goals (SDGs).

OKR (Objective and Key Results)

Objective 1: Reforms in BS-DCP programs' curricular content by introducing emerging digital dental technologies by 2025

Objective	Key Results	KPI	Measurement Method	Target	Person Responsible	Resource Requirement	Timeline
Reform the BS-DCP programs' curricular content and incorporate emerging technologies learning. Aligning with global standards by introducing at least five emerging digital technologies in the existing allied dental health undergraduate curriculum: mobile health (mHealth), AI-powered dental simulators, teledentistry, AR/VR, CAD-CAM, and 3-D printing by 2025.	KR 1.1: Review existing approved UG curricular content and introduce at least 05 emerging digital dental technologies	KAP Survey results Students' feedback surveys Course evaluations Students' internal assessment	KAP Survey results Students' feedback surveys Course evaluations Students' internal assessment	CRC / BoS / Academic Council Approval	Teachers/ Instructors of BS Dental Hygiene and BS Dental Technology Programs Secretary CRC Secretary BOS Program Coordinator	Human resource (Senior Faculty-dedicated to DCP) Digitalized Dental Technology such as Intra-oral scanners, Milling Machine, Digitalized portable x-rays, AI-powered dental simulators, and oral/ dental screening tools	Q2, 2026
	KR 1.2 Process and implement changes in the curriculum, both theory and hands-on skills development and practice	No. of courses content updated with updated TOS	Students' GPAs				
	KR 1.3: Evaluate Curriculum content assessment as per updated curricular specifications	Curriculum review after every three years	To determine the review needs, the Curriculum approval effective dates need to be checked.				

Objective 2: Launch interdisciplinary research projects on digital dentistry innovation, secure funding and disseminate results by 2026.

Objective	Key Results	KPI	Measurement Method	Target	Person Responsible	Resource Requirement	Timeline
Launch at least four interdisciplinary research projects and student-driven innovation on digital dentistry and predictive analytics by 2026, secure funding, and disseminate results through different platforms.	KR 2.1: Plan, develop and present in the form of student-led capstone projects, through national and international research competitions	No. of project proposals approved by IRB; No. of research completed No. of projects and presented or/published	Track approval timelines from submission to decision.	Necessary approval of at least 50% of the projects submitted	SDCP Admin and faculty; involvement of dental faculty for supervision Research Coordinator (required to be appointed by HR)	Human resource (Senior Faculty-dedicated to DCP) Digitalized Dental Technology such as Intra-oral scanners, Milling Machine, Digitalized portable x-rays, AI-powered dental simulators, and oral/ dental screening tools	Q4, 2026
	KR 2.2: Secure funding for at least three developmental and commercially viable research projects by 2026.	No. of proposals submitted and approved for funding	Track approval timelines from submission to decision.	Securing funding of at least 50% of the projects			

Objective	Key Results	KPI	Measurement Method	Target	Person Responsible	Resource Requirement	Timeline
Initiate at least five integrated emerging dental technology systems/projects with dental allied health practices at chairside and/or laboratory for patient care and outreach communities by 2026, such as CAD-CAM Dental Lab, Tele-Dentistry, and MHealth.	KR 3.1: Conduct AR/VR based trial among Pedodontics chair-side patients	Percentage/rate of project completion Students and Interns Logbooks. Chair-side patient counts and under-served population count in communities through feedback surveys.	Track approval timelines from submission to decision	Necessary approval of at least 50% of the projects submitted	Principal & Vice Principal of SDCP Principal Investigators and their Supervisors Teachers, Staff and Students of SDCP	Human resource (Senior Faculty-dedicated to DCP) Digitalized Dental Technology such as Intra-oral scanners, Milling Machine, digitalized portable x-rays, AI-powered dental simulators, and oral/ dental screening tools. Transport for mobility into the outreach underserved areas	Q4, 2026
	KR 3.2 Conduct Video-based post-extraction instructions trial among patients undergoing tooth extraction						
	KR 3.3: Develop Tele-Dentistry Program in Dow University Hospital in collaboration with existing Tele-Medicine Program						
	KR 3.4: Develop CAD/CAM, 3-D Printing in dental laboratory practice				Principal & Vice Principal of SDCP Planning & Development Dept. Competent authority		

Objective	Key Results	KPI	Measurement Method	Target	Person Responsible	Resource Requirement	Timeline
Develop at least one postgraduate level degree program in dental allied health education and launch it by 2027.	KR 4.1: Develop Program outline for PG degree programs	Rate of Curriculum development (paperwork) / No. of Meetings	Track approval timelines from submission to decision.	Launch of at least a master's level program	Program Director- Prof. Ambrina Qureshi Program Coordinator- Dr. Khawaja Hamadd-udin	Human Resource (Senior Faculty-dedicated to DCP) Communication and meetings with HEC Support from QEC and Registrar	Q2, 2027
	KR 4.2: Process for necessary statutory approvals	Rate of Process of Approvals/ No. of Meetings			Secretaries of Committees and Boards SDCP		
	KR 4.3: Process for approval and NOC from HEC	Rate of Process of Approval to launch			SDCP admin, Registrar, SPGS		

Goal 2: Expand global partnerships and community engagement to impact oral health disparities.

Goal Statement: Expand global partnerships, collaborations and community engagement to address oral health disparities and promote sustainable health solutions to achieve sustainability in overall health and well-being.

OKR (Objective and Key Results)

Objective 1: Strengthen community-engagements and partnerships with government and non-government organizations and industries for sustainable oral health interventions by 2025.

Objective	Key Results	KPI	Measurement Method	Target	Person Responsible	Resource Requirement	Timeline
Strengthening at least three local and international partnerships with government and non-government organizations, industries, schools, and community leaders for sustainable oral health interventions by 2025.	KR 1.1: Partner with three government and non-government-based industry leaders to develop and launch oral health projects/programs through Public-Private Partnership and collaborative resource development	No. of meetings held; no. of workshops conducted with partners; no. of MoUs and intent of letters for collaboration; industry feedback	Feedback and formal approvals	Launch a pilot outreach program using mHealth tools involving LHWs in one District (Malir)	Principal & Vice Principal of SDCP Principal Investigators and their Supervisors Teachers, Staff and Students of SDCP Registrar DUHS and other DUHS Competent authority	Travel and communication MoU based on shared funding and capacity development with international and local industry partners for CAD / CAM lab establishment	Q4 2025
			Capacity building and collaborative engagements /Partnership satisfaction	Formalize agreements / MoU based on shared funding and capacity development with international and local industry partners for CAD / CAM lab establishment.			

Objective 2: Equip mobile dental health solutions for the under-served communities by 2026.

Objective	Key Results	KPI	Measurement Method	Target	Person Responsible	Resource Requirement	Timeline
Equip at least two mobile dental health solutions with advanced diagnostic tools and service provision to improve oral healthcare in outreach and underserved communities through the youth-engagement program by 2026.	KR 2.1: Develop and Implement Tele-Dentistry solution for outreach communities in connection with existing DUHS Tele-Medicine Program	Burden of Disease % prevalence of oral healthcare need assessment No. of visits held; No. of dental solutions provided and need to be provided	Disease measuring tools	Feasibility plan assessment for inclusion of tele-dentistry in the existing tele-medicine program of DUHS	Principal & Vice Principal of SDCP Registrar DUHS and other DUHS Competent authority	Mobility to and in under-served areas Formal Mobile Oral Health Van / Transport	Q4, 2026
	KR 2.2: Install mobile dental units in underserved communities when and where required		Need assessment tools	Formalize execution of mobile dental team service provision to groups who are unable to access dental care, such as Jail inmates.			

Objective 3: Increase utilization of blockchain technology and digital patient record management by 2026.							
Objective	Key Results	KPI	Measurement Method	Target	Person Responsible	Resource Requirement	Timeline
Increase the utilization and at least 50% usage of blockchain technology and digital patient record management in existing dental clinics under coverage of HMIS at DUHS by 2026.	KR 3.1: Staff training in departments under auxiliary domains such as dental prosthetic labs, periodontology clinic, preventive/primary dental services in operative clinics, sterilization, radiology and reception/filter clinics	Staff training completion rate No. of procedures performed by DCPs in clinics and laboratories through entries made and evident on HIMS	Rate of staff training and feedback assessments	100% Staff training	SDCP admin, Principal and Vice Principal SDCP staff and teachers SDCP interns and auxiliary staff serving in dental colleges ICT- DUHS Principal Dental Colleges	Software and subscriptions	Q2, 2026
	KR 3.2 Extend blockchain-based digital patient record systems to dental labs and other auxiliary and primary clinical dental services independently provided by DCPs.		Rate of record keeping and maintenance	100% Record maintenance and utilization			

Goal 3: Invest in advanced infrastructure and capacity development to ensure sustainable institutional growth.

Goal Statement: Invest in advanced infrastructure and capacity development to ensure operational excellence and long-term institutional growth.

OKR (Objective and Key Results)

Objective 1: Launch Short Courses and Workshops for Human Resource and Capacity Development, preferably in Digital Dental Technology, 2026

Objective	Key Results	KPI	Measurement Method	Target	Person Responsible	Resource Requirement	Timeline
Prepare and launch at least five annual advanced level short courses and hands-on workshops for capacity development in dental allied healthcare, preferably in digital dental technology by 2025.	KR 1.1: Develop hands-on one-day capacity development workshop plans for Teledentistry, AR/VR, mOralHealth, CAD-CAM and 3-D Printing, AI-based teaching methods in Dentistry	No. of workshops and courses developed and launched No. of attending Participants' feedback surveys and satisfaction level	Assessment and evaluation plans, feedback system, etc.	At least 50% achievement in all these projects	Teledentistry - Ariba AR/VR - Dr. Athar CAD/CAM - Nazia mOralHealth - Sumar AI-based simulation - Mustaqeem Supervisors - Principal and Vice Principal SDCP Program Coordinator - Dr. Aqsa Iqbal Professional Development Center (PDC)	Collaborations, Industry partnerships Communications, MoUs	Q2, 2026
	KR 1.2: Develop advanced-level short courses for emerging dental technology - the course may be general, covering all topics or specific, such as for Tele-dentistry, CAD/ CAM, AI-based simulation, etc.		Need assessment and Course development, including assessment and evaluation plans, feedback system, etc.	Conduct/facilitate and organize a credited short course.		Support from University administration and Registrar to establish liaison	

Objective 2: Ensure dental healthcare system is staffed with allied dental health professionals / DCPs by 2026.

Objective	Key Results	KPI	Measurement Method	Target	Person Responsible	Resource Requirement	Timeline
Ensure maximum allied dental and para-clinical domains and departments in healthcare at least within DUHS are staffed by DCPs (dental hygienists and dental technologists) by 2026.	KR 2.1: Conduct baseline survey and identify DAs appointed after 2020 in any dental clinic / OPD of DUHS	Percentage/rate of project completion No. of JDs reviewed and revised Rate of implementation and challenges faced	Progress change	100% achievement	Principal SDCP HR - DUHS Competent authority DUHS	Human Resource Registrar, Principal SDCP	Q2, 2026
	KR 2.2: Review and revise Job Descriptions (JDs) of Dental Allied Health Professionals staffed at Dental Clinics and Labs in DUHS						
	KR 2.3: Coordinate with PM&DC to implement scoring system for quality auxiliary dental care and services in dental institutes						

Objective 3: Align SDCP infrastructure and programs with international accreditation standards by 2027.

Objective	Key Results	KPI	Measurement Method	Target	Person Responsible	Resource Requirement	Timeline
Align SDCP infrastructure and programs with international accreditation standards (such as AAA and CODA) to seek national and international certification of programs and practices by 2027.	KR 3.1: Complete comprehensive gap analysis of programs and infrastructure against AAA and CODA standards	Comparative analysis weighted results in % Certification readiness score	Mock evaluation results	Attend AAA and CODA awareness and information sessions followed by training and accreditation consultations.	Principal SDCP, Vice Principal SDCP, SDCP admin and staff Quality Enhancement Cell Competent authority and Registrar DUHS Legal and Audit Departments	Training and capacity development support	Q4, 2026
	KR 3.2: Process for at least 80% of required improvement in curriculum, program, faculty qualification and training		Assessment and Planning; filling gaps	Implementation and Compliance			
	KR 3.3: Apply to relevant body for program/infrastructure certification (whichever is ready in)						

Objective 4: Build a commercially viable dental laboratory equipped with CAD / CAM and Digital 3-D Printing by 2027.

Objective	Key Results	KPI	Measurement Method	Target	Person Responsible	Resource Requirement	Timeline
Build commercial-based dedicated dental laboratory equipped with CAD/CAM and 3D printing by 2027.	KR 4.1: Propose Planning Committee for CAD / CAM Digital Lab	Rate of project progress Cost-effective analysis and cost-utility analysis	PC-1 Approval Securing funds	PC- I development and process for project approval	Principal & Vice Principal of SDCP Industry partners and other funders/ collaborators Planning & Development Dept. Procurement Dept. Competent authority	Location to build a Commercial precision-based Dental Technology Laboratory inside the Ojha Campus	Q2, 2027
	KR 4.2 Define lab requirements, estimate costs, submit PC-I proposal.						
	KR 4.3: Formalize agreements, funding for capacity development and procurement			Project approval, infrastructure and resource development			
	KR 4.4: Develop CAD/CAM, 3-D Printing in dental laboratory practice						

SECTION V: RESOURCE PLANNING FOR ACHIEVING STRATEGIC GOALS

To achieve our strategic goals, it was crucial for us to first do the need assessment, assess the challenges that the SDCP faces, and further investigate the mitigation strategies and resources required.

CHALLENGES AND MITIGATION STRATEGIES

1. **Operational Risks & Challenges:**
- Limited senior faculty dedicated to allied dental health sciences programs, those available lack interest.
- Resistance to change.

   Resolution Strategies:
   Develop a faculty development plan, hire adjunct faculty, and incentivize particularly those who do not want to switch completely to DCP programs.

2. **Technological Risks & Challenges:**
- Difficulty in procuring and integrating advanced digital technologies such as CAD/CAM Dental Technology

   Resolution Strategies:
   Partners with technology vendors offering training and support; stagger implementation to ensure smooth adoption. Offer Capacity Development programs in collaboration with the existing users and international company vendors, and later increase resource capacity to buy the technology and establish a state-of-the-art Dental Technology Laboratory functional for commercial purposes. This will not only allow DUHS to continue providing conventional dental prostheses to the community but also provide added support by providing precision-based, more refined dental prostheses for those who can afford them.

3. **Financial Risks & Challenges:**
- High operational costs for maintaining digital tools and infrastructure.

   Resolution Strategies:
   Develop a sustainability plan, including revenue-generating initiatives like training programs and partnerships. Partnerships can be sought with under-served community groups and government / non-government organizations who require urgent dental care such as through Lady-Health-Workers programs, Special-need Children institutions, and programs for jail inmates, etc.

4. **Strategic Risks & Challenges:**
- Limited collaboration opportunities for DCPs within and outside the institution.

   Resolution Strategies:
   Leverage existing networks, attend global conferences, and create attractive value propositions for potential partners; work with local leaders within and outside the organization to build trust and tailor interventions to needs.

SECTION VI: IMPLEMENTATION AND MONITORING OF THE STRATEGIC PLAN

The effective execution of our strategic plan demands a structured implementation process and thorough monitoring to ensure alignment with our institutional goals. The following steps outline our approach:

1. IMPLEMENTATION STRATEGY

To facilitate the smooth execution of our strategic objectives, the following key actions were undertaken and certain steps are still under process:

- **Action Plan Development:** Detailed action plans were formulated for each strategic goal, specifying tasks, timelines, responsible units, and required resources. These plans were broken down into objectives into practical, phased initiatives to ensure efficient execution.

- **Resource Allocation:** In collaboration with the Human Resource and Finance departments, the SDCP will ensure appropriate resource allocation—including financial, human, and technological support. This may involve recruiting additional personnel, acquiring advanced equipment, and upgrading infrastructure to meet strategic needs.

- **Stakeholder Engagement:** Active participation from faculty, students, staff, and allied healthcare professionals will be encouraged throughout the implementation process. Transparent communication channels and regular engagement meetings will foster a collective sense of ownership and commitment. The most important stakeholders in our domain are the dental colleges of the DUHS and the faculty and administration of DIMT.

- **Training and Capacity Building:** To sustain the strategic initiatives, faculty and staff will receive continuous professional development aligned with emerging advancements in dental technologies, patient care standards, and innovative teaching methodologies. This will ensure that our institution remains at the forefront of dental education and public health interventions.

2. MONITORING AND EVALUATION

A structured monitoring framework has been in place to track progress, assess impact, and make necessary adjustments to optimize outcomes. Key components include:

- **Performance Metrics:** Clear Key Performance Indicators (KPIs) will be established to measure success across critical areas, including student academic performance, patient satisfaction, research productivity, clinical service quality, and institutional operational efficiency.

- **Quarterly Progress Reviews:** A Strategic Oversight Committee, including the Principal and the Vice Principal of the SDCP, will conduct quarterly evaluations to assess progress, identify challenges, and implement corrective actions where necessary.

- **Stakeholder Feedback Mechanisms:** Input from students, faculty, staff, and patients will be systematically gathered to evaluate the effectiveness of implemented strategies. This feedback will inform necessary improvements in academic programs, service delivery, and clinical care.

- **Annual Performance Review:** A comprehensive annual report will be compiled, detailing progress against strategic targets, analyzing key successes and areas for improvement, and outlining recommendations for the following year.

- **Adaptability and Continuous Improvement:** The strategic plan will remain dynamic, allowing for periodic refinements based on evolving healthcare trends, regulatory changes, and institutional needs. This commitment to adaptability will ensure sustained growth and impact.
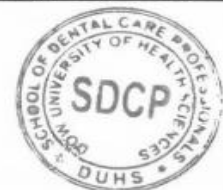
SECTION VII: LIST OF APPENDICES

No.	DESCRIPTION
A	The curriculum of BS Dental Technology
B	List of Existing Research Projects
C	List of Publications
D	SWOT ANALYSIS
E	TOWS MATRIX

Ref.No.: DUHS/AC-27/12.9.2023/A.Item-2   Date: October, 2023

SCHOOL OF DENTAL CARE PROFESSIONALS
DOW UNIVERSITY OF HEALTH SCIENCES KARACHI

CREDIT HOURS DISTRIBUTION OF BS-DENTAL CARE PROFESSIONALS (DENTAL HYGIENE PROGRAM)

SEMESTER	COURSE CODE	COURSE TITLE	UNITS (CREDIT HOURS)		TOTAL CREDIT HOURS
			LECTURE	LAB/ CLINICAL	
I	CHEM 201	CHEMISTRY	3	0	3
	CS 201	COMPUTER SKILLS	3	0	3
	ISL 201/ ETHIC 201	ISLAMIAT/ ETHICS	2	0	2
	ENG-F 211	ENGLISH FOUNDATION	3	0	3
	PIO 201	PHYSIOLOGY	3	0	3
	ANAT 201	ANATOMY	3	0	3
			17	0	17
II	MATH 212	MATHEMATICS	3	0	3
	PSY 102	PSYCHOLOGY	2	0	2
	HIS 102	HISTORY	2	0	2
	PAK-STD 202	PAKISTAN STUDIES	2	0	2
	BCHEM 202	BIOCHEMISTRY	3	0	3
	PHARM 202	PHARMACOLOGY	3	0	3
			15	0	15
III	ENG-W 323	EXPOSITORY WRITING	3	0	3
	MICRO 203	MICROBIOLOGY AND INFECTION CONTROL	3	0	3
	BSTAT 323	BIOSTATISTICS	3	0	3
	ENTP 203	ENTREPRENEURIAL STRATEGY	2	0	2
	DCP-GPATH 304	GENERAL PATHOLOGY	2	0	2
	DCP-REB 203	RESEARCH & EVIDENCE BASED LEARNING	2	0	2
			15	0	15
IV	CIVCM 204	CIVIC AND COMMUNITY ENGAGEMENT	2	0	2
	DCP-DPHAR 304	DENTAL PHARMACOLOGY	2	0	2
	DCP-OANA 304	ORAL ANATOMY & TOOTH MORPHOLOGY	2	2	4
	DCP-DMENT 314	DENTAL MATERIALS-I	2	2	4
	DCP-INTPR 304	INTRODUCTION TO PROSTHODONTICS	1	2	3
			9	6	15
V	DCP-OPATH 305	ORAL PATHOLOGY	2	0	2
	DCP-ICBIO 305	INFECTION CONTROL & BIOHAZARD MANAGEMENT IN DENTISTRY	1	2	3
	DCP-SDIAG 305	ORAL SCREENING & DIAGNOSIS	1	2	3
	DCP-DMENT 325	DENTAL MATERIALS-II	2	2	4
	DH-CDENT 415	COMMUNITY DENTISTRY-I	2	2	4
			8	8	16
VI	DCP-ORAD 406	DENTAL RADIOLOGY	2	2	4
	DH-PDENT 416	PREVENTIVE DENTISTRY-I	2	2	4
	DH-PERIO 416	PERIODONTOLOGY-I	2	2	4
	DH-CDENT 426	COMMUNITY DENTISTRY-II	2	2	4
			8	8	16
VII	DCP-PORTH 407	PREVENTIVE & INTERCEPTIVE ORTHODONTICS	2	2	4
	DH-PDENT 427	PREVENTIVE DENTSITRY-II	2	2	4
	DH-PERIO 427	PERIODONTOLOGY-II	2	2	4
	DH-BHCM 407	BASICS OF HEALTH CARE MANAGEMENT	2	2	4
			8	8	16
VIII	DH-AORTH 408	AUXILIARY MANAGEMENT IN ORTHODONTICS	2	3	5
	DH-AMAXF 408	AUXILIARY MANAGEMENT IN MAXILLOFACIAL SURGERY	2	3	5
	DH-APROS 408	AUXILIARY MANAGEMENT IN PROSTHODONTICS	2	3	5
	DH-AOPER 408	AUXILIARY MANAGEMENT IN OPERATIVE DENTISTRY	2	3	5
			8	12	20
		TOTAL CREDIT HOURS	88	42	130

SDCP

SCHOOL OF DENTAL CARE PROFESSIONALS
DOW UNIVERSITY OF HEALTH SCIENCES KARACHI

CREDIT HOURS DISTRIBUTION OF BS-DENTAL CARE PROFESSIONALS (DENTAL TECHNOLOGY PROGRAM)

SEMESTER	COURSE CODE	COURSE TITLE	UNITS (CREDIT HOURS)		TOTAL CREDIT HOURS
			LECTURE	LAB/ CLINICAL	
I	CHEM 201	CHEMISTRY	3	0	3
	CS 201	COMPUTER SKILLS	3	0	3
	ISL 201/ ETHIC 201	ISLAMIAT/ ETHICS	2	0	2
	ENG-F 211	ENGLISH FOUNDATION	3	0	3
	PIO 201	PHYSIOLOGY	3	0	3
	ANAT 201	ANATOMY	3	0	3
			17	0	17
II	MATH 212	MATHEMATICS	3	0	3
	PSY 102	PSYCHOLOGY	2	0	2
	HIS 102	HISTORY	2	0	2
	PAK-STD 202	PAKISTAN STUDIES	2	0	2
	BCHEM 202	BIOCHEMISTRY	3	0	3
	PHARM 202	PHARMACOLOGY	3	0	3
			15	0	15
III	ENG-W 323	EXPOSITORY WRITING	3	0	3
	MICRO 203	MICROBIOLOGY AND INFECTION CONTROL	3	0	3
	BSTAT 323	BIOSTATISTICS	3	0	3
	ENTP 203	ENTREPRENEURIAL STRATEGY	2	0	2
	DCP-GPATH 304	GENERAL PATHOLOGY	2	0	2
	DCP-REB 203	RESEARCH & EVIDENCE BASED LEARNING	2	0	2
			15	0	15
IV	CIVCM 204	CIVIC AND COMMUNITY ENGAGEMENT	2	0	2
	DCP-DPHAR 304	DENTAL PHARMACOLOGY	2	0	2
	DCP-OANA 304	ORAL ANATOMY & TOOTH MORPHOLOGY	2	2	4
	DCP-DMENT 314	DENTAL MATERIALS-I	2	2	4
	DCP-INTPR 304	INTRODUCTION TO PROSTHODONTICS	1	2	3
			9	6	15
V	DCP-OPATH 305	ORAL PATHOLOGY	2	0	2
	DCP-ICBIO 305	INFECTION CONTROL & BIOHAZARD MANAGEMENT IN DENTISTRY	1	2	3
	DCP-SDIAG 305	ORAL SCREENING & DIAGNOSIS	1	2	3
	DCP-DMENT 325	DENTAL MATERIALS-II	2	2	4
	OT-PDENT 415	PARTIAL DENTURE-I	2	2	4
			8	8	16
VI	DCP-DRAD 406	DENTAL RADIOLOGY	2	2	4
	DT-FPROS 416	FIXED PROSTHODONTICS-I	2	2	4
	DT-CDENT 416	COMPLETE DENTURE-I	2	2	4
	DT-PDENT 426	PARTIAL DENTURE-II	2	2	4
			8	8	16
VII	DCP-PORTH 407	PREVENTIVE & INTERCEPTIVE ORTHODONTICS	2	2	4
	DT-FPROS 427	FIXED PROSTHODONTICS-II	2	2	4
	DT-CDENT 427	COMPLETE DENTURE-II	2	2	4
	DT-BITEC 407	BASICS OF IMPLANT TECHNOLOGY	2	2	4
			8	8	16
VIII	DT-OTECH 408	ORTHODONTIC TECHNOLOGY	1	3	4
	DT-CRBRT 408	CROWN & BRIDGE TECHNOLOGY	2	4	6
	DT-CPD 408	CAST PARTIAL DENTURE	2	4	6
	DT-CAPS-408	CAPSTONE PROJECT	2	2	4
			7	13	20
		TOTAL CREDIT HOURS	87	43	130

APPENDIX B: LIST OF EXISTING RESEARCH PROJECTS

1. Building dental care professionals and Lady Health Workers Alliance for prevention of stunted growth in under 5-year-old children through oral health promotion program [Institutional Review Board Approval reference no.: IRB/DUHS/2024/295 dated 12th October 2024] submitted to the Sindh Higher Education Commission for the grant. Principal Investigator: Prof. Ambrina Qureshi
2. Evaluating video-based versus conventional post-extraction instructions for improved patient compliance and understanding [in the process by Principal Investigator: Ms. Ariba Arif]
3. Tele-Dentistry [in the process by Principal Investigator: Ms. Ariba Arif]
4. AR / VR Aid for anxiety control during dental procedures in Pediatric Patients [in the process by Principal Investigator: Dr Athar Khan]
5. CAD / CAM project [in the process by Principal Investigator: Ms. Nazia Anwar]

APPENDIX C: LIST OF PUBLICATIONS

None were published under the domain of SDCP.

CONTINUING EDUCATION COURSES COMPLETED BY SDCP STAFF 2019 – 2023

COURSE TITLE	YEAR	COMPLETED BY (STAFF NAME)
Awareness Session on Preparation of Program Self-Assessment Report	2019	Saeeda Soomro Sumer Malick Mustaqeem-ul-Haq
Basic Life Support (BLS)- DUHS	2019	Sumer Malick
Basic Infection prevention & Control	2019	Sumer Malick
Awareness Session on Novel Coronavirus- Fear vs negligence & Emergency Response	2020	All SDCP Staff/ Instructors
COVID-19 Contact Tracing (online)- John Hopkins University	2020	Saeeda Soomro
Get Interactive: Practical Teaching with Interaction (online)- University of London	2020	All SDCP Staff/ Instructors
Learning to teach Online (online) – UNSW Sydney	2020	All SDCP Staff/ Instructors
Foundations of Virtual Instructions	2020	Sumer Malick Sidra Maqsood Nazia Anwar Adnan Qamar
English for teaching Purposes	2020	Nazia Anwar
BCQs Writing Skills – DUHS	2021	All SDCP Staff/ Instructors
Writing Educational Objectives & Outcomes – DUHS	2021	All SDCP Staff/ Instructors
Road to Success – ICCBS-SIREN	2022	Saeeda Soomro Sumer Malick
40 hours of Digital Literacy Training -DUHS	2022	Saeeda Soomro
6-Day Interpersonal Skills	2021	Sumer Malick Sidra Maqsood
Constructive & Effective Feedback	2022	Saeeda Soomro Sumer Malick Sidra Maqsood
Certificate in Health Professional Education	2023	Nazia Anwar
Professional English Language Program- QEC	2023	Ariba Arif
Digitalization of Teaching & Learning	2023	All SDCP Staff/ Instructors

APPENDIX D: SWOT ANALYSIS

STRENGTHS	WEAKNESSES
1. Focused Programs: SDCP provides focused education and training programs to produce quality service providers in both para-clinical and technology dental auxiliary domains 2. Student Diversity: A diverse student body bringing varied perspectives to dental education. 3. Established Curriculum Proven track record with a curriculum incorporating research, community engagement, and practical training.	1. Outdated and limited Dental Technology Laboratory Infrastructure: Current dental technology facilities need enhancement to explore AI-driven diagnostics and digital dentistry solutions (such as 3D Printing and CAD/ CAM technology) 2. Insufficient Patient Record Management: No centralized or secure digital system for maintaining patient records. 3. Global Outreach: Limited international collaboration and exchange programs compared to global benchmarks.
OPPORTUNITIES	THREATS
1. International Collaborations: Potential to collaborate with global dental institutions and industry to enhance faculty training and student exposure. 2. Community Impact: Strong foundation in mobile dental screening and primary outreach services, with room to expand into underserved areas. 3. Vast Dental Infrastructure: The DUHS has a vast infrastructure of clinical dental practice with three dental hospitals also running executive clinics aspiring to provide quality patient management and care.	1. Cybersecurity Risks: Increased reliance on digital tools and blockchain necessitates advanced encryption and data protection measures. 2. Competitive Landscape: Other institutions adopting similar innovations could outpace SDCP if it lags execution. 3. Regulatory Challenges: Evolving guidelines for allied health education could require frequent curriculum updates and strain resources. 4. Demand for Affordable Excellence: Rising patient expectations for precise, high-quality care at competitive costs.

APPENDIX E: TOWS MATRIX

	OPPORTUNITIES	THREATS
	1. International Collaborations: Potential to collaborate with global dental institutions and industry to enhance faculty training and student exposure. 2. Community Impact: Strong foundation in mobile dental screening and primary outreach services, with room to expand into underserved areas. 3. Vast Dental Infrastructure: The DUHS has a vast infrastructure of clinical dental practice with three dental hospitals also running executive clinics aspiring to provide quality patient management and care.	1. Cybersecurity Risks: Increased reliance on digital tools and blockchain necessitates advanced encryption and data protection measures. 2. Competitive Landscape: Other institutions adopting similar innovations could outpace SDCP if it lags execution. 3. Regulatory Challenges: Evolving guidelines for allied health education could require frequent curriculum updates and strain resources. 4. Demand for Affordable Excellence: Rising patient expectations for precise, high-quality care at competitive costs.
STRENGTHS	**SO**	**ST**
1. Focused Programs: SDCP provides focused education and training programs to produce quality service providers in both para-clinical and technology dental auxiliary domains 2. Student Diversity: A diverse student body bringing varied perspectives to dental education. 3. Established Curriculum Proven track record with a curriculum incorporating	1. Establish a curriculum to attract international partnerships for faculty and student exchange. 2. Utilize the diverse student body to design and implement innovative, community-driven oral health programs. 3. Build on existing outreach infrastructure to expand the use of advanced tools like tele-dentistry and AI	1. Develop strong cybersecurity protocols to protect patient data while expanding digital tools, leveraging the institution's focus on advanced education. 2. Use SDCP's comprehensive curriculum to differentiate the institution in the competitive market by emphasizing real-world application and innovation in digital dentistry.

research, community engagement, and practical training.	diagnostics in underserved regions.	3. Proactively adapt the curriculum to meet regulatory changes by capitalizing on SDCP's community engagement and practical training programs.
WEAKNESSES	**WO**	**WT**
1. Outdated and limited Dental Technology Laboratory Infrastructure: Current dental technology facilities need enhancement to explore AI-driven diagnostics and digital dentistry solutions (such as 3D Printing and CAD/ CAM technology) 2. Insufficient Patient Record Management: No centralized or secure digital system for maintaining patient records. 3. Global Outreach: Limited international collaboration and exchange programs compared to global benchmarks.	1. Resolve patient record management issues by incorporating blockchain and cloud-based solutions, aligning with global best practices. 2. Address infrastructure gaps by forming strategic partnerships with global institutions to secure funding and access to advanced technology labs. 3. Use the opportunity of DUHS's clinical dental infrastructure to enhance practical training in AI, CAD / CAM, teledentistry, quality dental services, and robust yet cost-effective techniques in cross-infection control in dentistry	1. Mitigate competition by accelerating infrastructure upgrades and integrating cutting-edge technologies to match global standards. 2. Strengthening global collaboration to stay ahead of evolving regulatory challenges by adopting globally recognized accreditation standards. 3. Invest in cybersecurity and faculty development programs to address digital risks while maintaining quality education