

# 4<sup>th</sup> NATIONAL QUALITY CONFERENCE

17<sup>th</sup> - 18<sup>th</sup> MAY | 2024

*'Sustainability in Digital Age Through Quality'*

Organized by:

**ORCHID INTERNATIONAL COLLEGE**

and

**NETWORK FOR QUALITY, PRODUCTIVITY AND COMPETITIVENESS - NEPAL (NQPCN)**

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## Welcome

It is our great pleasure to organize the 4<sup>th</sup> National Quality Conference (NQC-04) which will take place in Kathmandu, Nepal, 17-18 May, 2024. This event will be organized by Network for Quality Productivity and Competitiveness - Nepal in collaboration with Orchid International College, Bijay Chowk, Gausala, Kathmandu where delegates from different organization can share their experience and learn from each other. Looking forward to your participation and sharing at the conference.

## Conference Objectives

- Network exchange ideas, knowledge, skills, experiences
- Learn breakthrough productivity methodologies
- Share knowledge on best practices
- Identify future trends

## Conference Theme

The theme for this conference is "Sustainability in digital age through quality". This theme aims to explore the impact of digital technology on Sustainability and how it can be harnessed to drive positive change and improve the quality of life.

## Conference Streams

- Growth & Sustainability through quality
- Sustainable relationship
- Sustainable processes
- Excellence through transformation
- Rethinking leadership and people
- Quality fundamentals

## What to Present

- Research study
- Best practice
- Literature review
- Case study / Best practice
- Evidence-based analysis
- Poster Presentation

## Key Dates

- Abstract Submission Deadline: 28<sup>th</sup> April, 2024
- Abstract Acceptance Notification: By 2<sup>nd</sup> May, 2024
- Early Bird Registration Ends: 7<sup>th</sup> May, 2024
- PPT Submission: 12<sup>th</sup> May, 2024

## Format for Abstract

- Abstracts should primarily concentrate on the themes of the conference, but they are not restricted solely to those subjects. We encourage submissions covering any aspect related to quality.
- Abstract should not exceed 300 words
- Preparation of abstract should be as follows:
  - Authors(s) and affiliation(s):
  - Email of corresponding author:
  - Content of abstract: brief introduction, objective, methods, results and conclusions.
  - Keywords: Five Keywords

Submission of abstract can be done through <https://bit.ly/nqc-04> or can be sent via email to [nqpcn1@gmail.com](mailto:nqpcn1@gmail.com).

## Opportunity to Publish Paper

Selected papers will be published in International Journal

## Quality Nexus: An International Journal

"Quality Nexus: Journal of NQPCN" is an international journal published by the Network for Quality, Productivity, and Competitiveness, Nepal (NQPCN). It operates under a peer-reviewed system and adheres to an open-access policy, with an annual publication frequency. The journal focuses on investigating best practices and emerging trends in quality, productivity, and competitiveness within various industries, both in production and service sectors. It encompasses a wide range of quality-related topics across disciplines such as management, humanities, social sciences, engineering, general science, and biomedical sciences. Content includes original research articles, case reports, review articles, and book reviews. Its primary objective is to serve as a platform for researchers, scholars, practitioners, and policymakers to share their research findings, insights, and innovations in these fields. The journal aims to facilitate the exchange of knowledge and ideas to advance the realms of quality management, productivity improvement, and competitiveness enhancement.

## Conference Fee

- Conference Participants Early Bird (Before 8<sup>th</sup> May): Rs 4000/-
- Conference Participants Normal (8<sup>th</sup> May onwards): Rs 5000/-
- Conference Participants International Delegates: USD 250.00
- Participants: NQPCN Members/ Orchidian: Rs 2500/-
- Conference Participants Students: Rs 2000/- Registration can be done through <https://bit.ly/nqc-04-r>

### KEYNOTE SPEAKERS

- [1] Professor Dr. Dinesh Pd Chapagain
- [2] Professor Dr. Sunity Shrestha Hada
- [3] Dr. Shashi Bhushan Purohit

### SUPPORTING ORGANIZATIONS



### MORE INFORMATION



**NQPCN**  
Conference Secretariat  
Maharajung  
Kathmandu  
[nqpcn1@gmail.com](mailto:nqpcn1@gmail.com)

<https://nqpcn.info.np>

## **Message from Conference Chair**

It is my immense pleasure to welcome all ladies and gentlemen to the 4<sup>th</sup> National Conference on Quality organized jointly by Network for Quality Productivity and Competitiveness - Nepal (NQPCN) and Orchid International College.

NQPCN is a Network of Entrepreneurs, Managers, Academicians, and Consultants of Nepal and was established in 2004 to enhance competitiveness through sharing, learning and applying globally developed quality and productivity tools and techniques for social and economic development of the nation. NQPCN is a not-for-profit organization solely run from membership fees and voluntary contributions. NQPCN actively promotes awareness about the importance of quality, productivity, and competitiveness in Nepal. Through conferences, seminars, workshops, trainings, and learning and sharing programs, NQPCN educates and advocates businesses, industries, and stakeholders about the benefits of adopting quality management practices. Similarly NQPCN has planned to publish a research based quality journal “Quality Nexus”. I congratulate the whole NQPCN team for their continuous effort and integrity towards enhancement of quality and its application in the real world.

Orchid International College, is an Information Technology (IT) and Management college in Nepal which was established in the year 2010 AD. The college currently offers Information Technology, Management and Social Work courses at the Bachelor's levels. The College is committed to preparing students for success in both academic and professional spheres. By fostering a culture of innovation, integrity, and excellence, the college strives to empower students to become leaders and change-makers in their respective fields, making a positive impact on society and the world at large.

In this conference, we have thirty five research papers under various themes. Similarly, six keynote speeches will be the major attractions of this conference. I would like to extend heartfelt thanks to all individuals and institutions for believing NQPCN, making our journey successful and memorable, especially Orchid International College team for organizing this 4<sup>th</sup> National Quality Conference 2024.

I wish all the best to all speakers, presenters, participants, valued NQPCN members Orchid team and volunteers for the successful completion of this conference.

Associate Professor Dr. Bijay Lal Pradhan  
Conference Chair  
President, NQPCN

### **Message from College Principal**

It is with immense pleasure and honor to welcome you all to this prestigious 4th National Conference on Quality, hosted by Orchid International College. As the Principal of this esteemed institution, it fills me with great pride to witness the convergence of brilliant minds and passionate souls dedicated to the pursuit of quality excellence.

At Orchid International College, we believe in fostering a culture of innovation, excellence, and continuous improvement. This conference stands as a testament to our unwavering commitment to quality education and the relentless pursuit of knowledge.

I extend my heartfelt gratitude to the Network for Quality Productivity and Competitiveness Nepal for their collaboration in organizing this event of paramount importance. Together, we aim to ignite conversations, share insights, and inspire actions that will shape the future landscape of quality standards in our nation and beyond.

To all our esteemed speakers, presenters, participants, and volunteers, I express my deepest appreciation for your invaluable contributions and unwavering support. Your dedication and enthusiasm are the driving forces behind the success of this conference.

As we embark on this enlightening journey, let us seize this opportunity to learn, grow, and collaborate towards building a brighter, more sustainable future fueled by the principles of quality excellence.

Wishing you all a fruitful and memorable experience at the 4<sup>th</sup> National Conference on Quality.

Warm regards,

Bidur Dahal  
Principal  
Orchid International College

# 4<sup>TH</sup> NATIONAL QUALITY CONFERENCE - 2024

## Program Schedule

Program Schedule: May 17, 2024 (Friday)

May 17	Day I Program		
08:00-09:00	Registration/Tea/Breakfast		
09:00-10:00	Inaugural Function		
Keynote Session I & II			
Time	Paper Code & Category	Title	Presenters
10:10-11:20	Quality-KN-01	Quality and Sustainability- Does it go hand in hand?	Prof. Dr. Biju Kumar Thapaliya VC, Purbanchal University
	Quality-KN-02	QUALITY: Perspective and predictive (Yesterday,Today and Tomorrow)	Prof. Dr. Dinesh Prasad Chapagain Founding President, NQPCN
Technical Session I: Quality Management System(QMS)			
11:20-12:30	Paper Code : QMS-01	Quality Improvement in Transformer following Quality Management System	Arun Dongol
	Paper Code : QMS-02	Bayesian Modeling for Assessing Learning Outcomes among University Students in Nepal	Dr. G. P. Dhungana
	Paper Code : QMS-03	Managing Age Diversity and Bridging Generational Gaps for Organizational Productivity	Alok Chaudhary
	Paper Code : QMS-04	Effect of Age Diversity Management in Workplace on Work Life Balance	Manish Sadaula
	Paper Code : QMS-05	Diversity Management on Workplace Performance and Productivity	Madhu Baral
12:30-13:20	Lunch		
Technical Session II: Quality Management System(QMS)			
13:20-14:30	Paper Code : QMS-06	Whether the Hydropower Development Policy, 2001 is Investment Friendly?	Dhun Bahadur Budhathoki

	Paper Code : QMS-07	Accessing the Role: Reinsurance's Influence on Life Insurance Product Pricing - A Qualitative Exploration	I R Subedi
	Paper Code : QMS-08	Psychological Impact of Management Changes on Individuals and Teams: Understanding Dynamics and Coping Strategies	Namrata Gautam
	Paper Code : QMS-09	Ethics in Public Institutions During Crisis Management in Nepal	Shiva Prasad Sharma Paudel
	Paper Code : QMS-10	Behaviour Finance Practice Among Individual Investors for Stock Investment Decisions	Mohan Prasad Sapkota,
Technical Session III: Quality Education and Technology(QET)			
14:30-15:20	Paper Code : QET-01	Exploring Post-Epidemic Marketing Strategies in Higher Education: A Synthesis of Recent Research and Implications.	Shyam Swarup Khanal
	Paper Code : QET-02	Quality Attributes Identification for Sustainable Software Products	Dhiraj Kumar Jha
	Paper Code : QET-03	Perceived Service Quality on Students’ Satisfaction	Hari Prasad Upadhyaya
	Paper Code : QET-04	Application of Lexmax Contraflow problem: A Case Study of Tinau Flood Evacuation	Gunakhar Pokharel
	Paper Code : QET-05	Impact of Contemporary Technology Integration on User Behavior in Public Transport, With a Specific Focus on Sajha Yatayat in Kathmandu.	Nabaraj Pandey
15:20-15:40	Tea Break		
Keynote Session III			

15:40-16:20	Quality-KN-03	Quality Assurance in Higher Education	Prof. Dr. Hridaya Ratna Bajracharya
<b>Technical Session IV: Quality Management System(QMS)</b>			
16:20-17:20	Paper Code : QMS-11	Corporate Governance and The Performance of Banks in Developing Nations: Insights From Nepal.	Tikaram Chalise
	Paper Code : QMS-12	Adoption of Total Quality Management and Its Influence on the Performance of Local Bodies of Nepal	Hira Shrestha
	Paper Code : QMS-13	Influence of Relationship Marketing in Banking Performance	Dhan Raj Chalise
	Paper Code : QMS-14	Overview of Quality Champion Program in Nepal	Enusha Khadka
<b>Program Schedule: May 18, 2024 (Saturday)</b>			
<b>May 18</b>	<b>Day II Program</b>		
<b>08:20-09:00</b>	<b>Tea/Breakfast</b>		
<b>Time</b>	<b>Paper Code &amp; Category</b>	<b>Title</b>	<b>Presenters</b>
<b>Keynote Session IV</b>			
09:00-10:30	Quality-KN-04	Managing the Final Leg: Addressing Challenges and Solutions in Last Mile Quality Management for Online Services	Er. Hareram Bhattarai
	Quality-KN-05	Transformative Learning: Quality Education for 21 <sup>st</sup> Century.	Dr. Muni Raj Chhetri
	Quality-KN-06	Quality Assurance of Basic Medical Education in Nepal: National and Global Standards	Mr. Shital Bhandary
<b>Technical Session V: Quality Health and Environment(QHE)</b>			

10:30- 11:30	Paper Code : QHE-01	Maternal Periodontitis and Pregnancy Outcome at Women's Tertiary Hospital in Nepal	Shakti Sharma
	Paper Code : QHE-02	Measuring Readiness and Service Availability of Health Facilities in Nepal: Country Case Scenario of Implementing Minimum Service Standards (MSS) for Health Facilities	Ambika Thapa Pachya
	Paper Code : QHE-03	Post Traumatic Stress Disorder in COVID Survivors in Damak COVID Hospital, Damak Municipality	Surakshaya Dhakal
	Paper Code : QHE-04	Analysis of the Factors Affecting the Quality of Life among Elderly Residents of Old-Age -Homes in Kathmandu: the Bayesian Approach	Bijaya Bhattarai
	Paper Code : QHE-05	An Intervention on E-waste Management in Kathmandu, Nepal	Lalbabu Lalkarn
<b>Technical Session VI: Quality Health and Environment(QHE)</b>			
11:30-12:30	Paper Code : QHE-06	Evaluation of surface water quality using water quality index in Phewa Lake, Nepal	Dr. Rajeshwori Malla-Pradhan
	Paper Code : QHE-07	Disposal of Used Sanitary Pads Through Vermitechnology	Sujata Awal
	Paper Code : QHE-08	Impact of Climate Change on The Production of Maize in The Hill Agroecological Zone of Nepal.	Tulsi Ram Bhusal
	Paper Code : QHE-09	Senior Citizen Quality Circle and 'The Gen Alpha Quality Learning '. Exploring Quality Assurance and Quality Control at Local Community Schools at Ward-No-5, Kathmandu Metropolitan City.	Sanziev Sangraula



	Paper Code : QHE-10	Climate Change Impact on Hydro-Energy and Livelihood	Rudra Gorkhali
	Paper Code : QHE-11	Therapeutic Potential of Propolis and Bee Bread in Type-2 Diabetes	Ratna Thapa
12:40-13:30	Lunch		
Technical Session VII: Quality Food Technology(QFT)			
13:30-14:30	Paper Code : QFT-01	Utilization of Brewer's Spent Grain: a Major By-Product of Brewer industry	Manisha Nembang
	Paper Code : QFT-02	Process Optimization And Quality Evaluation of Kiwifruit (Actinidia Deliciosa) Wine Making	Swastika Dhakal
	Paper Code : QFT-03	Evaluating Butter Cookie Brands in Nepal: Price vs. Quality Analysis	Urika Bhattarai
	Paper Code : QFT-04	Factors Affecting Millet Production in Nepal	Dr. Hari Prashad Joshi
	Paper Code : QFT-05	Nutritious Food Choices among Pediatric Cancer Patients	Kabita Maharjan
14:30:15:30	Valedictory Session/Tea		

## **Keynote Speakers**

Quality-KN-01

Quality and Sustainability- Does it go hand in hand?

Prof. Dr. Biju Kumar Thapaliya

VC, Purbanchal University

Quality-KN-02

QUALITY: Perspective and predictive(Yesterday,Today and Tomorrow)

Prof. Dr. Dinesh Prasad Chapagain

Founder President, NQPCN

Quality-KN-03

Quality Assurance in Higher Education

Prof. Dr. Hridaya Ratna Bajracharya

Technical Director, UGC Nepal

Quality-KN-04

Managing the Final Leg: Addressing Challenges and Solutions in Last Mile Quality Management for Online Services

Er. Hare Ram Bhattari

Executive Member, NQPCN

Quality-KN-05

Transformative Learning: Quality Education for 21<sup>st</sup> Century.

Dr. Muni Raj Chhetri

QAA Export, UGC, Nepal

Quality-KN-06

Quality Assurance of Basic Medical Education In Nepal: National and Global Standards

Mr. Shital Bhandary

Associate Professor, School of Public Health and Health Professions Education

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## **Managing the Final Leg: Addressing Challenges and Solutions in Last Mile Quality Management for Online Services**

Er. Hare Ram Bhattari

Executive Member, NQPCN

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### ***Abstract***

Ensuring that the final stage of product or service delivery meets or exceeds customer expectations lies at the heart of last mile quality management. When a product or service reaches a customer, it inherently holds value. This value is shaped by the customer's evaluation of the product and associated services, as well as whether their rightful expectations are met. The intricacies of this value system are further complicated by human perception, making it a challenging endeavor.

In the realm of online services, which are increasingly prevalent and often lack physical interaction between the customer and service provider, these complexities are amplified. This paper investigates the multifaceted issues and challenges associated with last mile quality. Key aspects include after-sales services, delivery delays, order compliance, and customer satisfaction. It explores how businesses can leverage Total Quality Management (TQM) principles and the Plan-Do-Check-Act (PDCA) methodology to devise effective solutions, thereby enhancing customer satisfaction, streamlining operations, and gaining a competitive edge in today's dynamic marketplace

***Keywords: PDCA, TQM, Last mile quality management, Customer expectations, Online services.***

## **Quality Assurance of Basic Medical Education In Nepal: National and Global Standards**

Shital Bhandary

Associate Professor, School of Public Health and Health Professions Education Unit,  
Patan Academy of Health Sciences, Lalitpur, Nepal  
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### ***Abstract***

Medical education in Nepal started in 1972 after the establishment of the Institute of Medicine under Tribhuvan University. The basic medical education, commonly known as MBBS in Nepal, has grown from a single public institute to multiple public and private institutes. These medical institutes need to be accredited annually to run the MBBS program in Nepal. Thus, the Medical Education Commission (MEC) is carrying out the “annual” accreditation of the medical colleges, health science institutes/academies and universities for MBBS program to ensure quality. MEC is also in the process of getting global recognition as the national accreditation agency from World Federation of Medical Education (WFME).

Methods : MEC is following the accreditation standards revised by the Nepal Medical Council in 2011 and 2017. This accreditation standards are also framed as per the nine WFME standards divided into basic and quality improvement standards for basic medical education i.e. MBBS program. MEC collects self-assessment report of each institute through on-line portal followed by physical inspection by the team of experts that also submit a report. These two reports are assessed by the expert team and uses the predetermined “yardstick” to determine the MBBS seats for each institute, which is endorsed by the MEC executive committee. MEC has also started the global recognition of its accreditation system for the MBBS program from WFME.

MEC Executive Committee endorsed the allocation of 1895 MBBS seats for 2023 academic session. Out of which 17 institutes received 100 seats each whereas rest received less than 100 seats. MEC fulfilled these seats using a national common entrance examination and series of matching sessions based on student’s merit and choices. Medical institutions in Nepal started the MBBS program as per the predetermined annual calendar set. MEC has also started the process to get global recognition of its accreditation system for MBBS program from WFME. MEC is now recognized in the WFME website as one of the agencies that is under review for the basic medical education accreditation system from WFME since November 2023.

MEC is following a robust and rigorous quality assurance system to run MBBS program in Nepal. It has also started global recognition of its accreditation system from WFME, which will pave the way for MBBS graduates from Nepal to study and work anywhere in the world.

***Keywords: Institute of Medicine (IoM), Tribhuvan University, MBBS program, Medical Education Commission (MEC), World Federation of Medical Education (WFME)***

***Paper Code : QMS-01***

## **Quality Improvement in Transformer following Quality Management System**

Arun Dongol

QMS Consultant

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### ***Abstract***

A transformer is an electrical machine that transforms voltages or current to step up or step down as required. To manufacture a transformer, it should follow the statutory and regulatory requirements but customer requirements other than statutory and regulatory requirements are optional. In case of transformer, transformer losses (No load Loss and Load loss) are determined by Nepal Electricity Authority. The losses affect consumption of electricity. The more the losses, the more the electricity consumption. So, the NEA revised the transformer losses to reduce electricity consumption. The transformer company has to follow the new statutory and regulatory requirements of NEA. The QMS of the company follows the changes adopted in the products resulting in the quality improvement (losses) of the transformer.

***Keywords: Transformer, Losses, Electricity consumption, Statutory and regulatory requirement, Quality improvement.***

**Paper Code : QMS-02**

## **Bayesian Modeling for Assessing Learning Outcomes among University Students in Nepal**

G. P. Dhungana<sup>1</sup>, P.R. Tiwari<sup>2</sup>

<sup>1</sup>Lecturer, Department of Statistics, Birendra Multiple Campus, TU, Nepal

<sup>2</sup>Lecturer, Department of Population Studies, Birendra Multiple Campus, TU, Nepal

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### ***Abstract***

The notion of learning outcomes in higher education extends beyond academic accomplishments to encompass broader competencies, including adaptive skills and social integration across diverse contexts. In many instances, learning outcomes are viewed as a student's performance in university evaluation, usually represented by grade or percentage. Evaluation of such outcomes and their relation to student satisfaction in the Nepalese university context helps to understand the situation of learning outcomes. Hence, this study aims to develop the probability and Bayesian model for assessing learning outcomes and its relation to student satisfaction. To assess learning outcomes, both probability distribution and Bayesian modeling were employed. Maximum likelihood estimation techniques were utilized in the probability model, whereas the Bayesian model employed Markov Chain Monte Carlo simulation methods, specifically the No-U-turn sampler. The parameters of the probability model as well as the Bayesian model have been estimated. Then, predicted samples of learning outcomes by both techniques, represented by SGPA scores and percentage scores, were generated. The findings revealed a positive relationship between student satisfaction and learning outcomes. We conclude that students who are satisfied in an academic institution tend to achieve better learning outcomes.

Furthermore, the Exponentiated Odd Lomax Exponential distribution demonstrated goodness of fit through mathematical and graphical assessments. Bayesian modeling of the proposed distribution was validated through trace plots, running mean plots, autocorrelation analysis, and other mathematical criteria such as effective sample size ( $n_{eff}$ ) and Rhat. In Bayesian model, utilizing gamma distribution as the prior distribution, and probability model, both demonstrated to be an effective model for modeling the learning outcomes of Nepalese students in higher education. Consequently, the proposed distribution presents an alternative model for handling educational data, particularly regarding learning outcomes regarding Nepalese context.

***Keywords: Bayesian Modelling; Markov Chain Monte Carlo; Learning Outcomes; SGPA Scores; Nepalese Students in Higher Education***



**Paper Code : QMS-03**

**Managing Age Diversity and Bridging Generational Gaps for  
Organizational Productivity**

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***Abstract***

Age diversity management and bridging generational gaps in organizations are crucial for boosting productivity and ensuring long-term success in today's workplace. This abstract provides an overview of a study investigating age diversity management and bridging generational gaps in organizations, drawing from theory and research. Rooted in Generational Theory, the study explores the implications of age diversity, aiming to understand its complexities and impact on productivity. Objectives focus on identifying strategies for collaboration, informed by Selectivity Theory (SST) and Contingency Theory. The methodology involves a systematic approach, including literature review and empirical research. Findings show that in today's varied workplace, organizations must confront and embrace age diversity if they hope to succeed.

***Keywords: Age diversity management, bridging generational gaps, productivity, workplace success, Generational Theory, Selectivity Theory (SST), Contingency Theory.***

**Paper Code : QMS-04**

## **Effect of Age Diversity Management in Workplace on Work Life Balance**

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### ***Abstract***

This paper studies the impact of age diversity management on work-life balance, focusing on the context of corporate culture. By studying the relationship between age diversity management strategies and employees experiences across different age groups, the study aims to provide insights that can inform organizational policies and practices. Through a comprehensive literature review and theoretical analysis, the paper examines the role of flexible work arrangements, age-inclusive organizational policies, and theoretical framework as Generational Theory in shaping work-life balance outcomes. The findings highlight the importance of recognizing and accommodating the diverse needs of employees of all ages to foster a supportive and inclusive work environment beneficial to employee well-being and organizational success.

***Keywords: Age Diversity Management, Work Life Balance, Corporate Culture, Diversity Management Strategies, Employees Experiences, Flexible Work Arrangement, Age-Inclusive Organizational Policies, Generational Theory, Employee Well-Being, Organizational Success***

**Paper Code : QMS-05**

## **Diversity Management on Workplace Performance and Productivity**

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### ***Abstract***

Globalization and technological progression foster organizations to be Multicultural and diversified. Organizations witness a multiplicity of workforce diversity. age, gender, educational background, mother tongue, languages known to speak, write, food consumed, culture, religion, celebrations, values, belief are some of the diversities that exist. The current study explored the possible effect of workplace diversity on employees' performance. The purpose of this study was to assess the effects of workplace diversity on the performance of employees. The study sought to establish the extent of demographic diversity, extent of social cultural diversity and how the management of the workforce diversity affects organizational effectiveness. Based on the findings, the study concludes that diversity management is a process intended to create and maintain a positive work environment where the similarities and differences of individuals are valued. The study recommended that organizations should design and implement customized diversity programs that more precisely target the needs of individual employees, specific departments, or the organization as a whole. It also recommended that applicants for employment should be treated fairly in their employment and advancement, based on their abilities, and not based on arbitrary characteristics of color, religion, national origin, gender, age, sexual orientation or physical handicap.

***Keywords: Diversity, Workforce, Individual work employees' performance, demographic diversity***

**Paper Code : QMS-06**

## **Whether the Hydropower Development Policy, 2001 is Investment Friendly?**

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### ***Abstract***

Nepal's gross hydropower potential is estimated to be 83,290 MW. Out of which, 42,133 MW is ascertained as economically exploitable. However, in the span of 113 years only 2,945 MW i.e. 3.54 % have been exploited. Hydropower sector operates under a policy framework. However, there was no empirical study on the HDP, 2001. On the other hand, several complications were found during literature review.

**Objective:** The objective of this study was to find out the investment friendliness of existing HDP, 2001. Moreover, it aimed to dig out the policy constraints and obstacles facing the hydropower developers.

This study embraced mixed research design. Judgmental sampling technique was employed owing to difficulty in determining the entire population and unit of analysis. Inductive reasoning for qualitative data and deductive reasoning for quantitative data was persuaded. To collect the opinion a set of questions was developed on KoboToolbox software and approached to 108 informants with 25 diverse sectors of hydropower. Therein, three independent variables such as Financial Incentives Sufficiency(FIS), Return on Investment Sufficiency (RoIS) and Market Access Sufficiency (MAS) along with a single dependent variable, Investment Friendliness (IF), were examined to gauge the perceptions of stakeholders using a five-point Likert scale. In order to analyze quantitative data, statistical tools such as measurement of central tendency and test of hypothesis were computed. Likewise, to analyze qualitative data the theory of interpretivism was embraced

HDP, 2001 investment friendly most repeated score i.e., mode appeared at 70. Similarly, investment friendly mean score resided at 60.64 along with standard deviation score of 20.42. On the other hand, the result of quality data also resulted in HDP, 2001 components as investment friendly.

Based on the result this study concludes that the HDP, 2001 is investment friendly. However, there are several rooms to be addressed i.e. wheeling charges, forest clearance, land acquisition, EIA and transmission line, and so forth.

***Keywords: Hydropower Development Policy(HDP) 2001, Investment Friendly, Power Purchase Agreement(PPA), Term of the License, & Policy evaluation.***

**Paper Code : QMS-07**

**Accessing the Role: Reinsurance's Influence on Life Insurance Product Pricing - A Qualitative Exploration**

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***Abstract***

Life insurance plays a crucial role in providing financial security, especially in developing economies. However, the accessibility and affordability of these products pose significant challenges. This study investigates the relationship between reinsurance and the pricing of life insurance products in developing countries. Using a qualitative approach, the research examines how reinsurance practices affect the design and affordability of life insurance offerings for populations in these regions. Through in-depth interviews with key stakeholders such as life insurance executives, reinsurance professionals, and regulators, the study explores the types of reinsurance employed (proportional, non-proportional, facultative) and their impact on pricing strategies. The analysis delves into how reinsurance practices influence risk management, capital requirements, and competition within the life insurance sector. Ultimately, the study seeks to determine whether reinsurance promotes a more competitive pricing environment, leading to broader availability of products and improved financial security for individuals in developing nations.

***Keywords:*Life insurance, Developing economies, Accessibility, Affordability, Reinsurance, Pricing, Qualitative approach**



**Paper Code : QMS-08**

## **Psychological Impact of Management Changes on Individuals and Teams: Understanding Dynamics and Coping Strategies**

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### ***Abstract***

This research paper investigates the psychological impact of management changes on individuals and teams, aiming to clarify the underlying dynamics and identify effective coping strategies. Drawing from an extensive literature review in organizational psychology and change management, this study synthesizes existing knowledge to provide insights into the multifaceted nature of psychological responses to management changes. The research examines how individuals and teams experience and cope with various management changes, including leadership transitions, restructuring, and strategic realignment. The psychological processes such as emotional reactions, cognitive appraisal, and coping mechanisms between individual and team dynamics. Key themes identified from the literature review include the range of emotional responses individuals and teams exhibit during management changes, including feelings of uncertainty, anxiety, and loss of control. The review explores various coping strategies employed by individuals and teams to navigate these changes, such as seeking social support, reframing perspectives, and engaging in proactive problem-solving. Furthermore, the research highlights the importance of effective communication, leadership support, and organizational culture in mitigating the negative psychological impact of management changes and resilience among employees and teams. Through existing literature this study provides valuable insights into the psychological dimensions of management changes and offers practical implications for organizations seeking to facilitate smoother transitions and enhance employee well-being. Thus, this research contributes to a deeper understanding of the psychological mechanisms in management changes and informs the development of evidence-based interventions and support mechanisms to promote psychological resilience and adaptation among individuals and teams facing transitions.

***Keywords: management changes, organizational psychology, change management, coping strategies, psychological impact, leadership transitions.***

***Paper Code : QMS-09***

## **Ethics in Public Institutions During Crisis Management in Nepal**

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### ***Abstract***

The article explores the ethical dimensions of crisis management within public institutions, with focus on Nepal's response to the Covid-19 pandemic. Emphasizing the importance of maintaining ethical standards during times of crisis, the study investigates the relationship between institutional performance and public trust, hypothesizing that the devaluation of ethics within public institutions exacerbates public grievances. Utilizing quantitative research methods with desk studies and questionnaire surveying strategies, the study examines public perceptions of crisis management and the efficacy of grievance monitoring mechanisms within public institutions. Findings reveal widespread dissatisfaction with crisis management practices and a growing reliance on social media as a platform for expressing grievances. However, there is skepticism regarding the reliability of information shared through these channels. The study underscores the need for improved crisis management strategies and enhanced accountability mechanisms within public institutions. It highlights the role of social media in shaping public discourse and calls for greater attention to ethical considerations in crisis response efforts. Ultimately, the research contributes to an understanding of the complex interplay between ethics, performance, and public trust in the context of crisis management.

***Keywords: Ethics, public institutions, crisis management, grievances, social media***

**Paper Code : QMS-10**

## **Behaviour Finance Practice Among Individual Investors For Stock Investment Decisions**

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### ***Abstract***

Standard finance cornerstones on investors are rational and guided by mean variance relationship and expected utility principles. However, individual investors violate the rational process of decision-making and are guided by their beliefs, moods, emotions, sentiments, personality and biases. This study focuses on examining the influence of behavioural finance of individual investors on equity investment decisions. This study is guided by positivism philosophy of research and utilized the descriptive cum analytical research design. The sample consist of 385 individual investors who participate into stock investment decision in the Nepal Stock Exchange (NEPSE). This study utilized descriptive and inferential statistics including hypothesis and multiple regression analysis. Behavioural bias is represented by overconfidence, risk perception, advocate recommendation, herding, social interaction and availability bias. In addition, overconfidence, risk perception, advocate recommendation, herding, social interaction, and availability bias has significant positive influence on equity investment decisions. Finally, evidence indicates that behavioural biases have significant influence on stock investment decisions of individual investors. Hence, financial markets frequently breach the fundamental principles of stock market and are guided by investors' irrationality and biases that lead to unusual trading of securities, investors' market participation through emotion, holding of losing securities, buying securities at price high and sell at price fall, and influenced by other investors' decisions.

***Keywords: Advocate Recommendation, Availability Biases, Herding, Overconfidence, Risk perception, and Social Interaction***

**Paper Code : QMS-11**

## **Corporate Governance and the Performance of Banks in Developing Nations: Insights from Nepal.**

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### ***Abstract***

Since the east asian financial crisis in 1997, banks, including both commercial and industrial ones, have been a central focus of numerous studies on corporate governance. A significant body of literature highlights the detrimental role that banks often play in corporate governance. Despite a considerable amount of research investigating corporate governance within the banking sector, there's a notable lack of such studies focused on the Nepalese banking industry. Recent corporate scandals in some Nepalese financial institutions have underscored the urgency of implementing effective corporate governance practices within the country's banking sector.

This study aims to assess the correlation between corporate governance and the financial performance of Nepalese commercial banks by surveying stakeholders of these banks. The empirical analysis spans all commercial banks in Nepal from 2010 to 2016. Seven constructs comprising 28 items were employed to gauge corporate governance, while four items were utilized to evaluate financial performance. Data was gathered from various stakeholders including chairpersons, CEOs, directors, company secretaries, managers, and shareholders of commercial banks.

Confirmatory factor analysis was conducted using path analysis and structural equation modeling. Modification indices and standardized residual analysis were employed as diagnostic measures to evaluate the model fit. The empirical findings derived from the structural model confirm that a commitment to governance serves as the fundamental mechanism through which perceived shareholder rights, perceived board responsibility, and perceived disclosure standards positively influence bank performance.

***Keywords: corporate governance, firms performance, CFA, path analysis, SEM.***

**Paper Code : QMS-12**

## **Adoption of Total Quality Management and Its Influence on the Performance of Local Bodies of Nepal**

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### ***Abstract***

Quality service is a great concern in the dynamic socio-political context of public sector organizations. It is a glue that binds the government with the citizens and other people globally. In a competitive world, government's entities must become stronger and more effective in terms of service, quality, cost and innovation. The critical success factors for TQM implementation in the government entities are yet to be explored, especially in the context of Nepal where the implementation of federalism is in the infant stage and citizens' expectations are unlimited. Thus, the present study will dig out in depth about the TQM adoption and its influence in performances of two different historical and ancient municipalities mainly Kirtipur and Bhaktapur. It will further analyze the moderating effect of the composition of the committee on TQM and performance of these two municipalities.

This study will use mixed research design (Sequential Quan-Qual approach) and will be analytical in nature. The targeted samples are politicians, bureaucrats and citizens of Bhaktapur and Kirtipur Municipalities. Based on statistical calculation, the study will carry out a questionnaire survey with almost 400 participants and interviews with at least 10 respondents from each municipality. The correlation, regression model will be run in IBM SPSS 26 Version software to analyze the quantitative data. Further, thematic analysis will be conducted to identify emerging themes and patterns in qualitative data.

This study will measure the extent of application of TQM and its influence on performances of both municipalities, moderating effects of composition of committee on TQM and municipality's performances and explore the critical factors affecting effective implementation of TQM.

***Keywords: TQM, Performance, Kirtipur and Bhaktapur Municipalities, Nepal***

**Paper Code : QMS-13**

## **Influence of Relationship Marketing in Banking Performance**

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### ***Abstract***

Relationship Marketing is the marketing campaigns which help to build the bonding for customer retention for longer period of time. It helps to boost morale of bankers and helps in the enhancement of banking performance. The crucial aspect of relationship marketing is to bridge gap between bashful and timid bond into never lasting perpetual integrity. In mean time of COVID-19 pandemic where current reserve are piling up in bank's locker. Relationship Marketing can become game changer to move and shake the status quo economy. The relationship marketing can also be helpful for enhancing investment and solve the problems of have not through financial reform.

**Purpose:** The main purpose of this research paper is to find out influence of relationship marketing on banking performance.

This research is based on the topic associated with the banking reform in time of this crucial period. So, ground study of the commercial bank of Nepal is done for finding conclusive evidence to justify the facts associated with relationship development. The researcher precisely wants to forward his ideas through statistic verification. Hence, self structured questionnaire are designed and data are collected through quantitative approach. Researcher has adopted quantitative research design for this research because it justifies findings through statistical assessment.

Relationship Marketing helps to create positive vibe in financial institution as bank. In the research, researcher tested the relationship with hypotheses and with help of statistical analysis facts are justified. The research reveals significant relationship of Relationship Marketing and Bank performance. Banks has to be render vulnerable services to society. Thus, findings suggest banking sector to adopt relationship marketing for enhancing banking performance.

This research paper is summarized through self designed questionnaire and field study. Thus, research is one of a type and creates higher value. This research paper is primal work of researcher which content unique content.

**Implication:** Researcher is highly inspired by need of current banking way ahead. In the mean time of global pandemic, new paradigm is needed to improve banking status. Thus this research will be helpful for scholar and academician for introducing Relationship Marketing as the core content of study for moving economic tiers. It is also helpful for bankers and policy maker to enhance corporate value and enrich banking performance.

Beside that well presented facts and findings through statistical justifications will help scholars and policy maker to rigorously understand corporate value. Likewise, research is helpful for policy maker to make effective policy for banking sector of Nepal.

**Keywords:** *Relationship Marketing, Banking Performance, Increased Competition*

**Paper type:** *Research Paper*

**Paper Code : QMS-14**

## **Overview of Quality Champion Program in Nepal**

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### ***Abstract***

The Quality Champion Program, under the EU-Nepal Trade and Investment Programme (TIP), has been pivotal in fostering sustainable economic growth and poverty reduction in Nepal by bolstering trade and participation in global coffee and pashmina value-chains. Facilitated by the International Trade Centre (ITC), the initiative aims to elevate product quality and operational standards in the coffee sector to meet EU and other pertinent regional and national regulations. . As part of this support, a pool of Quality Champions (QCs) were trained and qualified to serve Nepalese business as part-time trainers, coaches and advisers through relevant national institutions. QCs have been equipped to manage quality-related activities in businesses and to improve food safety in the coffee value chain. The training covered the fundamentals of Lean, as well as problem solving techniques, internal standardization, food safety and food safety standards, an introduction to ISO9001, training and advisory skills.

Implemented initially as a pilot project within the coffee sector, the program engaged stakeholders across the value chain, including farmers, cooperative unions, coffee shop owners, exporters, and processors. Training sessions, conducted by QCs, targeted around 150 farmers associated with selected stakeholders from the Central Coffee Cooperative Union and the Nepal Coffee Producers' Association in nine districts of Nepal. The application of Lean practices has yielded tangible benefits, including increased productivity, resource efficiency, reduced post-harvest losses, and enhanced product quality. Notable outcomes include an 8% rise in coffee production, a 13% boost in productivity, and annual cost savings of USD 3625. Furthermore, Lean principles have led to a 21% reduction in coffee defects and a 15-minute decrease in processing time per lot.

The program's emphasis on sustainable practices, such as waste reduction, optimal water usage, minimal chemical application, and responsible land management, underscores its commitment to environmental stewardship. Stakeholders attest to the program's success through heightened confidence, improved profitability, and enhanced customer trust, affirming the transformative impact of Lean practices in Nepal's coffee industry.

***Keywords : Quality Champion program, Coffee Value Chain, LEAN Management, International Trade center***

*Paper Code : QET-01*

## **Exploring Post-Epidemic Marketing Strategies in Higher Education: A Synthesis of Recent Research and Implications.**

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### ***Abstract***

Education is increasingly viewed as a service product within the realm of marketing studies, with higher education institutions facing heightened pressure to strategically innovate and offer programs that cater to students' evolving needs. Despite efforts to address market demand with various programs, it remains uncertain whether these initiatives align with students' desires. This study aims to investigate post-epidemic marketing strategies in higher education, synthesizing the discussion section from eight articles. To identify recent articles, keywords such as "college choice," "marketing strategies," "higher education," "student enrollment," and "post-epidemic" were utilized, supplemented by a review of journals and their impact factors, as well as references in seminal articles. Thematic analysis reveals ten key themes, including adaptation to changing student preferences, enhanced marketing strategies, globalization efforts, and sustainability concerns. Notably, educational leaders employ diverse approaches to attract students, enhance reputation, and navigate the evolving landscape. This study not only contributes valuable insights to the literature on higher education marketing strategies but also sheds light on the implications of these findings for higher education institutions, policymakers, and other stakeholders. By providing a deeper understanding of the post-epidemic educational landscape, this research aims to inform decision-making processes and pave the way for future research endeavors in this field.

***Keywords: College choice, marketing strategies, higher education, student enrollment, post-epidemic***



## **Quality Attributes Identification for Sustainable Software Products**

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### ***Abstract***

Software products are the pillars of all enterprises from large to small. For the sustainable growth of the enterprises, their business process might require re-engineering which ultimately rely whether or not the software product being used is sustainable (future proof). The initial investigations have shown the role of certain quality attributes throughout the Software Development Lifecycle from a sustainability view point. The software development organizations and software development processes are being practiced for quite some time now, yet, the metrics through which sustainability can be defined for software product is still yet to be coined. The issue currently faced by both the customers and the software development organizations is that they cannot sync their need and experience with each other, respectively. The organizations should clearly identify the software quality attributes and their interdependencies which ultimately depend on the type of software system and its operational context. The case study-based research method with the main objective of finding the best applicability of the sustainability model in different contexts of software products. We have an aim to enhance our model, after collecting more such quality attributes or other helpful attributes that might not have been explored on sustainability dimensions. We have identified and selected three software projects as cases of our study, that were developed, in completely different and independent specific situations like, stakeholders, working environment, nature of the tools used. The result has surprisingly shown that the most of the attributes that contributed to the sustainability of the software product were primarily either from the social aspect or from the technical aspect. Therefore, socio-technical engineering is the need of time and should be more profoundly practiced in the Software Industry.

Although completeness, and maintainability were other desirable features, it was by-passed during the study of the system. This would have created biasedness for our study for selection of the system. The results also show that sustainable models should be developed and along with other software artifacts even before the software is put into use. Although with not much focus, the case study also helped identify quality attributes that weren't considered in the economic, technical and social dimensions of the sustainability-quality model.

***Keywords: Software product, sustainability, socio-technical.***

## **Perceived Service Quality on Students' Satisfaction**

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### ***Abstract***

Perceived service quality is pivotal in shaping students satisfaction within higher education institution, influencing their overall satisfaction. Service quality consists of various dimensions like reliability, responsiveness, assurance, empathy, and tangibles, which collectively impact students; satisfaction on the educational environment. Understanding and enhancing perceived service quality is essential for fostering positive student outcomes and creating a supportive learning atmosphere. Thus the objective of this research is to find the impact of perceived service quality on students' satisfaction using structural equation modeling. An analytical cross sectional study was carried out among 392 Students of Tribhuvan University, Nepal from February 2024 to April 2024. Data was collected by using a self-structured questionnaire. Collected data was entered and analyzed by using R studio. Data was analyzed using descriptive and inferential statistical tools. In the descriptive statistics mean, SD were used for continuous variable, frequency and percentage for categorical variables. In the inferential statistics to find the association between satisfactions to perceived service quality domain structural equation modeling were used. P-value 0.05 was considered as statistically significant. Among 392 students, majority of them were in the age group 20-25 years, most of them were females and they were from bachelor degree. Results showed 66.3% (with 95% confidence interval 61.41% to 71%) students were satisfied with the academic environment. Significantly associated factors with satisfaction were age, stream of education and level of education. There is significant positive correlation between Satisfaction and service quality domain and their relationship were (Satisfaction=0.324 Tangibility+0.295 Reliability+0.446 Responsiveness+0.249 Assurance+0.531Empathy). This relationship fulfilled all the model fitting criteria of SEM. Also, 76.9% of the variance in satisfaction is due to Tangibility, Reliability, Responsiveness, Assurance and Empathy. Age, stream of education and level of education were significantly associated sociodemographic variables while tangibility, reliability, responsiveness, assurance, and empathy are significantly associated with service quality domain with satisfaction. Service quality domain collectively accounting for 76.9% of the variance in satisfaction.

**Keywords:** *SEM, tangibility, reliability, responsiveness, assurance, empathy.*

*Paper Code : QET-04*

## **Application of Lexmax Contraflow Problem: A Case Study of Tinau Flood Evacuation**

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### ***Abstract***

The maximum flow evacuation planning problem aims to shift the maximum possible number of evacuees from a risk zone to a safe zone within a given time. Different mathematical models for the problem have flourished in literature. Network flow problem is useful in emergency evacuation. The goal of this talk is to examine the maximum evacuation planning problem over a network with non- conservation flow constraint for vertices that are prioritized based on facilities. This presentation is based on the study flood affected people at Butwal Sub Metropolitan Municipality and rescue them by shifting in difference place by prioritized on the basis of food, shelter, distance form source, and other facilities. We focus on the application of Lexmax contraflow network model with implement for real data set of Tinaau flood at Butwal, Rupandehi for evacuation.

***Keywords: Evacuation, Network flow, Maximum flow problem, Tinau Flood, Prioritized Vertices, Multi-network.***

**Paper Code : QET-05**

**Impact of Contemporary Technology Integration on User Behavior in Public Transport, with a Specific Focus on Sajha Yatayat in Kathmandu.**

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***Abstract***

This research examines how contemporary technology integration, including real-time tracking, electronic ticketing, and station announcement systems, impacts user satisfaction in public transport, with a focus on Sajha Yatayat in Kathmandu. Using a mixed-method approach involving surveys, interviews, focus groups, observational studies, and secondary data analysis, the study investigates how these technological advancements influence passenger convenience, accessibility, and overall experience. It seeks to understand how socio-economic factors shape the adoption and utilization of technology-enhanced public transport services, particularly considering demographic variables, income levels, and cultural norms. By employing statistical tools like the t-test, the research compares perceptions and behaviors across different demographic groups, providing quantitative insights into technology adoption patterns. Grounded in the positivist philosophy and drawing upon the SERVQUAL theory, the study examines dimensions of service quality within the context of technology-enhanced public transport. The research aims to fill a crucial gap in understanding how these factors influence individuals' perceptions and acceptance of technological enhancements in public transport. Ultimately, the findings intend to guide policymakers and transportation authorities in optimizing public transport systems to better meet the diverse needs and expectations of users, thereby contributing to the evolution of public transportation experiences in urban settings.

***Keywords: Impact of contemporary technology integration on user satisfaction in public transport.***

**Paper Code : QHE-01**

## **Maternal Periodontitis and Pregnancy Outcome at Women's Tertiary Hospital in Nepal**

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### ***Abstract***

Oral health conditions are linked to different systemic conditions among them one is periodontitis and adverse pregnancy outcome. Sizable gap in the community's understanding of relation between oral health status and systemic correlations aimed to conduct this study. The objective of this study is to find out the relationship between maternal periodontitis and adverse pregnancy outcome. A cross-sectional study among 145 third-trimester women was conducted. Data sources included medical records, interviews, and oral screenings from dental surgeons. Data was entered in MS Excel and analyzed in SPSS. Ethical approval was obtained from the Paropakar Maternity Hospital Institutional Review Committee (IRC) with reference number 63/2430. Majority of respondents were between the ages of 20 to 29 years (74.5%), predominantly belonging to the Janajati ethnic group (54.5%) and Hindu religion (69%). Most participants were literate (94.5%) with varying levels of education, and the majority resided inside the valley (75.9%). Regarding occupation, a larger portion were non-working (64.1%). In terms of obstetric history, 75.9% had no previous deliveries, and the majority had experienced only one pregnancy (75.9%). Tobacco use was reported by 6.2% of participants. Morbid statuses such as hypertension (11%), pregnancy-induced diabetes (5.5%), and thyroid issues (12.4%) were noted among participants. Additionally, urinary tract infections were observed in 31.7% of cases, while periodontitis was present in 36.6%. Regarding pregnancy outcomes, 41.4% experienced adverse pregnancy outcomes (APO). The odds ratio (OR) of 2.696 suggests that participants with periodontal disease are about 2.7 times more likely to experience adverse pregnancy outcomes (APO) compared to those without periodontal disease. One parameter of risk factor for adverse pregnancy outcome is maternal periodontitis in current study. However, additional rigorous and interventional research could be carried out for subsequent research in comparable environments to ensure confirmation

***Keywords: Adverse Pregnancy Outcome, Cross Sectional, Maternal, Periodontitis, Tertiary Hospital.***

**Paper Code : QHE-02**

**Measuring Readiness and Service Availability of Health Facilities in Nepal:  
Country Case Scenario of Implementing Minimum Service Standards  
(MSS) for Health Facilities**

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***Abstract***

Minimum service standards (MSS) for health facilities is an approach of the Ministry of Health and Population, Nepal. It entails areas of governance and management, clinical service management and support service management in health facilities. It is driven by the global call for quality health services where global evidence suggests that access to health facilities alone, without quality services, does more harm than the benefit to the people's health. From development to implementation and gap fulfillment, the process incurs Plan-Do-Study-Act (PDSA) Cycle. The working group of subject experts is appointed by MoHP for the development of the tool. The group undergoes a rigorous process of desk review and consultative workshops to prepare the draft tool. The field testing of the draft tool is done and feedback is incorporated from the stakeholders and finalized tool is processed for approval. After approval tool is disseminated among wider audience and pool of resource persons are prepared to further implement it. MSS assessments are done by MoHP and its institutions along with support from the partner organization and the respective health facilities. MSS have been contextualized as individual set for each level of the health facilities both allopathic and Ayurveda- from health posts to tertiary level hospitals and at present includes four service specific hospitals- pediatrics, maternity, mental health and tropical disease, two more are in the process of development – cardiac services, trauma services. MSS assessment of health facilities are quantified in percentages which helps in tracing the improvement of the health facilities and sets ground to compare across same level of health facilities. After assessment of health facilities, sharing meeting is done with managerial stakeholders, technical and non-technical staffs of the hospital where both strengths and areas to improve are shared. Thus discussed gaps are identified and prioritized for setting up action plans and resources are identified to fulfill them.

These action plans are further shared to the management of the health facilities, respective local, provincial and federal levels based on which resources are mobilized in the respective health facilities. This links MSS assessment to Annual Work Plan and Budgeting of MoHP. Over the decade of implementation of MSS, there have been remarkable changes in the managerial aspects of the health facilities for service readiness and availability in Nepal. Furthermore, the digitalization of MSS assessments have helped real-time check on the scores and action plans of the health facilities. Practice of MSS scoring is unique case scenario of Nepal which has a visible impact in the improvement of the service availability and readiness. It has a potential of replicability to improve the management of health facilities in all three spheres of governance and leadership, clinical service and support services in developing countries.

***Keywords: Minimum service standards (MSS), Health facilities, Plan-Do-Study-Act (PDSA) Cycle, MSS assessment, Service availability and readiness***

**Paper Code : QHE-03**

**Post Traumatic Stress Disorder in COVID Survivors in Damak COVID Hospital, Damak Municipality**

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***Abstract***

The devastating impact of COVID is not limited to the loss of life and health damage. It has equally affected the mental health of survivors and has presented in many forms including the Post Traumatic Stress Disorder (PTSD). Present study was conducted with the aim of understanding the situation of PTSD in COVID survivors and the impact of demographic, socio- economic, health and lifestyle related variables on PTSD symptoms. This is a cross sectional study conducted in severe COVID patients (requiring Oxygen Support), now survivors, who were admitted to Damak COVID hospital from 14th April to 16th October of 2021. A sample of 228 COVID survivors was selected and information related to PTSD were taken via a standard set of questionnaires. Patient personal and health details and the answer to the PTSD questionnaire were collected by the researcher through personal visits. Informed consent was taken from the patients and all the information collected from the patient was solely according to the patient response and any standard health procedure was not conducted to verify the response. Descriptive statistics including frequency and percentage were used to summarize the data and to describe the distribution of samples. Similarly, inferential statistics including chi-square test, Fisher's exact test and Binary logistic regression were used to infer the overall result from the taken sample. Pseudo R<sup>2</sup> test, Reliability test, Hosmer and Lemeshow and Multicollinearity test were used as model adequacy test to validate the model fitted. After the analysis, it was found that only three variables, among the many studied, have significant impact in mental health i.e. presence of PTSD symptoms. According to the binary logistic analysis, male COVID patients were found to be more likely to have PTSD symptoms compared to the female patients. Similarly, presence of diabetes before the infection (OR) and occurrence of diabetes after the infection were found as significant factors which posted a higher threat of PTSD in COVID survivors compared to non-diabetic patients. Furthermore, people who had high blood pressure before COVID and who acquired chronic obstructive pulmonary disorder (COPD: a set of breathing related problems) after COVID were more likely to show PTSD symptoms compared to contemporary.

***Keywords: COVID survivors, PTSD, Diabetes, High blood Pressure, COPD, Binary logistic regression***

**Paper Code : QHE-04**

**Analysis of the Factors Affecting the Quality of Life among Elderly Residents of Old-Age -Homes in Kathmandu: the Bayesian Approach**

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***Abstract***

The concept of quality of life is the individual's perception of their own life and is influenced by various factors. There is no universal definition of quality of life, but WHO defines it as an individual's perspective of their position in life relative to their goals, expectations, standards, and concerns. This study aims to identify factors that affect the quality of life of elderly individuals residing in old-age homes in the Kathmandu district and their impact.

The study used a cross-sectional research design and collected primary data from 172 elderly residents from nine old age homes in the Kathmandu district. The WHOQOL-OLD questionnaire was used to measure quality of life. The quality of life was categorized into three categories and the Bayesian approach on proportional odds model of ordinal logistic regression was used to find the impact of significant explanatory variables on the quality of life.

Out of the total respondents, 56.98% had fair QoL, while 19.18% had high QoL. The study found that the type of old-age home, satisfaction with food and accommodation, satisfaction with the internal environment, and visits from relatives significantly influenced the QoL of elderly people.

***Keywords: QoL, Ordinary Logistic Regression, Cross-sectional, significant.***



**Paper Code : QHE-05**

## **An Intervention on E-waste Management in Kathmandu, Nepal**

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### ***Abstract***

The e-waste, also known as electronic-waste, is one of the rapidly-growing pollution problems. E-waste problems originally appeared in developed countries but it soon became one of the prominent problems around the world. The e-waste dumped in a landfill takes years to degrade and leachates from the disposal site release the toxic metals and chemicals such as lead, cadmium, mercury, chromium, nickel, arsenic etc. The objective of this study is “ To assess an intervention (public participation) for e-waste management in Kathmandu, Nepal”. Primary data will be collected by Questionnaire, Focus group discussion, Survey, Key Informants Information and Observation methods. Data analysis will be done using statistical tool R Studio. A collection of 422 samples from Kathmandu’s (even) wards out of 32 and Teku transfer station as well as Sisdol dumping site are to be analyzed to see if public participation (an intervention) matters the E-waste management in Kathmandu. The findings will be tested for generalization at national and universal level. The hypothesis is that ‘People participation is significantly related to E-waste Management .’

***Keywords: E-waste, Solid-Waste-Management, Public Participation, Kathmandu.***

**Paper Code : QHE-06**

## **Evaluation of Surface Water Quality Using Water Quality Index In Phewa Lake, Nepal**

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### ***Abstract***

Phewa Lake, the second largest lake of Nepal receives untreated wastewater from surrounding restaurants, hotels and urban areas. As the lifeline for the economic progress of that region, the water quality of Phewa lake is of great concern. Therefore, this study was conducted to assess the water quality of Phewa Lake using the water quality index (WQI). WQI is a widely used evaluation tool that displays the overall water quality status in a single number. Water samples were collected from sixteen sampling locations of Phewa Lake covering an area of 5.726 Km<sup>2</sup>. Ten physicochemical parameters namely electrical conductivity (EC), pH, turbidity, total dissolved solids (TDS), alkalinity, biological oxygen demand (BOD), chloride, dissolved oxygen (DO), hardness and nitrate were analyzed for the computation of WQI. The calculated WQI ranges from 20.74 to 70.65, indicating excellent water to unlimited anthropogenic activities due to COVID-19 pandemic. 87.5% of the sampling site, the water quality was excellent and 12.5% was of good category. Except for turbidity, all the physicochemical parameters were within the permissible limit. The findings of this study are fundamentally important to concern authorities which may aid in decision making for effective lake management.

***Keywords: Water quality index, physicochemical parameters, Phewa Lake, water quality***

**Paper Code : QHE-07**

## **Disposal of Used Sanitary Pads Through Vermitechnology**

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### ***Abstract***

Menstruation wastes are the wastes that are generated by a female in her reproductive years. With rapid urbanization, rising incomes, expanded product availability, the use of disposable sanitary napkins is increasing but after use they end up in municipal solid waste which increases the volume of solid waste and enhances related environmental and health issues. This study was conducted to the study feasibility of vermi-composting technology for safe disposal of used sanitary pads, to test biodegradability of used sanitary pad and to test manure produced by vermicomposting of used pads for pH, moisture content, Nitrogen, Potassium, Phosphorus and C:N ratio. An experimental setup was arranged in the Health Environment and Climate Action Foundation for a biodegradability test of eight different pads. Replicate sets of each type were arranged for accuracy. Artificial blood was made. *Eisenia foetida* was used. Weight of these earthworms introduced and degradability of pads were also noted. The physical and chemical parameter test of the manure extracted was done in Aastha Laboratory, Kathmandu. The biodegradability test showed that biodegradable commercial pad (degradable pine pulp, G1) and traditional pad (reusable cotton cloth, B1) has high biodegradability. In all the setups the manure volume or weight increased whereas the weight of the earthworm decreased. The maximum weight of the manure was found in biodegradable commercial pad i.e. 2.5 kg. Similarly, the maximum weight of the pad undecomposed was that of Brand 1 Commercial regular pad (cotton pad, O1). The pH of G1 was almost neutral ranging from 6 to 7.8. The highest percentage of Nitrogen, and Potassium were noted in traditional pad and Phosphorus was found in biodegradable pad. Manure has a tentative ideal C: N ratio. Results of this study shows that vermitechnology can be a viable option for safe management and disposal of sanitary pads.

***Keywords: Vermitechnology, Vermicomposting, Biodegradable, Reusable, Sanitary Pads.***

**Paper Code : QHE-08**

**Impact of Climate Change on The Production of Maize in The Hill Agro Ecological Zone of Nepal.**

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***Abstract***

This study investigates the impact of climate change on maize production in Arghakhanchi district, Nepal's hilly region. The research examines trends in temperature, rainfall, and maize yield from 1990 to 2021. An upward trend is observed in annual average temperature. No significant change is detected in annual rainfall. Maize production shows a steady increase throughout the study period.

A statistically significant positive correlation exists between annual average temperature and maize yield. No significant correlation is found between annual rainfall and maize yield.

The study suggests that rising temperatures might benefit maize production in the studied region. However, it acknowledges limitations due to the lack of data on non-climatic factors like seed varieties and farm management practices. It recommends further research to get a more comprehensive picture.

***Keywords: Climate Change, Mize Production, Farm Management Practice, Seeds Variety***

**Paper Code : QHE-09**

**Senior Citizen Quality Circle and ‘The Gen Alpha Quality Learning ’.  
Exploring Quality Assurance and Quality Control at Local Community  
Schools at Ward-No-5, Kathmandu Metropolitan City.**

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***Abstract***

The concept of Senior Quality Circle was initiated by Prof. Richard Ennals of Kingstone University, UK in the year 2010. Senior citizens and retired people, specially, the ones who retire from quite influential positions, can make tremendous contributions to society. Senior Citizen age is internationally practiced as 60 years, whereas in Nepal it is 68 years. In this stage senior citizens prepare for the transition to life outside work. Senior citizens accumulate experience, skills and tacit knowledge, which may be valuable for the local community education system such as primary and secondary schools. This stage can be used to fulfill the realization of one's dream of making substantial contributions towards society. A quality circle or quality control circle is a group of workers who do the same or similar work, who meet regularly to identify, analyze and solve work-related problems. The term quality circles was most accessible defined by Professor Kaoru Ishikawa in his 1985 handbook, "What is Total Quality Control? The Japanese Way". This study try to investigate whether senior citizens participation could contribute to local schools quality assurance and control as they get involved in quality circles. The study will also explore how effectively (mechanism) the senior citizens could be integrated in the local community schools quality circle. This study will also explore the possible areas of senior citizen participation in quality assurance and control at local community Schools.

The exploratory and descriptive research design method will be used in this study. Qualitative and quantitative approaches will be crucial from data collection to data analysis. Open-ended interviews along with structured questionnaire surveys shall be considered for this study and observation will be carried out among stakeholders. The targeted population for this study considers 1 the Principals, Teachers, Local Education Authority, Students, and Parents from ward 5, KMC; and experts from outside shall be approached for this study. This study will be validated in various stages through questionnaire validity (face validity) - Expert's opinion, Construct validity under which convergent and discriminant and criterion based validity shall be crucial to support this study. For reliability of this study results and findings cronbach alpha shall be conducted.

***Key words: Senior Citizen, Quality Circle, Quality Assurance, Local Community and Schools.***

**Paper Code : QHE-10**

## **Climate Change Impact on Hydro-Energy and Livelihood**

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### ***Abstract***

Climate change is the changes in average weather pattern due to increase in greenhouse gases concentrations which absorb heat in the atmosphere and change and disturbing ecosystem and livelihoods. It is now a major environmental and developmental issue in the world. Based on web of science, google scholar, springer and Taylor and Francis database, this article aims to find critical knowledge/gaps regarding different aspect of climate change impact on water resources, hydro-energy and livelihood in Nepal. It also helps to analyze the adverse effects on agricultural sector. Water resources and agriculture are vulnerable in climate change system; causing productivity loss, soil degradation, landslide, water scarcity, resources depletion, etc. Climate change awareness empowers the farming communities to take appropriate measures to mitigate the negative consequences of this phenomenon. It is inherently a process of learning by doing, requiring adjustment and innovation over time in response to new information and experiences.

***Keywords: Climate Change, Greenhouse Gases, Water Resources, Hydro-Energy, Livelihoods***

***Paper Code : QHE-11***

## **Therapeutic Potential of Propolis and Bee Bread in Type-2 Diabetes**

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### ***Abstract***

Little is known about the effectiveness of Nepalese bee products on diabetes, hepatic and renal failure. The European honeybees (*Apis mellifera* L.) are able to produce many bee products, including bee pollen, propolis, bee bread and royal jelly. The medicinal properties of these bee products have been recognized for thousands of years by the ancient civilizations, in the modern era, they have a limited use, essentially as nutritional supplements or health products. This study aims to investigate the effects of Bee bread and propolis as a complementary therapy for type -2 diabetic. In these clinical trials, all voluntary patients were administered bee bread (fermented pollen) and propolis (bee glue). For this study, 20 patients were recruited. The patients were divided into three groups. Groups-A: Diabetes patients (N=15), Group-B: Cirrhosis (Liver failure) patients (N=3) and Group-C: Renal functional disorder (N= 2). For the treatments, all the patients were orally administered 10 grams of bee bread (2 teaspoons/day) and 15 drops of propolis with lukewarm water for 3 months. The improvement in the blood sugar, liver and renal functions were observed between 3-10 months. The energy intake and improved physiological activities were observed in diabetic patients. The findings of clinical trials could make an important contribution to the field of using propolis and bee bread to protect the liver and kidney effect by Type-2 Diabetes. The therapeutic use of bee bread and propolis exhibited no side effects.

***Keywords: Propolis, bee bread, diabetes, liver, renal function.***

*Paper Code : QFT-01*

## **Utilization of Brewer's Spent Grain: A Major By-Product of Brewer Industry**

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### ***Abstract***

Brewer's spent grain (BSG) is the most abundant by-product generated in the beer-brewing process. Globally, brewers produce about 38.6 million tons of spent grain a year. Despite BSG being rich in fiber and protein, its use is mainly limited to animal feed only. This research aimed to utilize such potential by-product by converting it into flour and formulating proportions of spent grain flour and refined wheat flour which complies with the mandatory standard of Nepal as specified by DFTQC. The proportions of BSG and refined wheat flour were obtained using linear programming method. The proportion of 4% BSG and 96% refined wheat flour was recommended. The data obtained from tests were statistically analysed using T-test at 5 % level of significance. The particle size, mean bulk density, moisture content, crude fiber, crude protein, acid insoluble ash, total ash, crude fat, alcoholic acidity, gluten content, sedimentation value and pelshenke value of recommended flour were found to be <1.18 mm, 0.776 g/cm<sup>3</sup>, 13.08%, 1.55%, 11.51%, 0.061%, 0.73%, 2.37%, 0.085%, 9.62%, 30.33 ml and 243.97 min. respectively. The amount of Brewer's spent grain in the recommended proportion is very less compared to the amount of refined wheat flour. However, the amount of BSG can be increased by making finer and more uniform BSG flour and by sieving out the coarse particles. This research demonstrates the potential of using spent grain, a significant brewery by-product, as flour which may contribute to mitigating food crisis to some extent.

***Keywords:*** *Brewer's spent grain (BSG), By-product, Flour, Refined wheat flour, Particle size, Bulk density*



**Paper Code : QFT-02**

## **Process Optimization and Quality Evaluation of Kiwifruit (*Actinidia Deliciosa*) Wine Making**

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### ***Abstract***

Fruits, being highly perishable commodities, have to be either consumed fresh or processed into various products. At present, interest in functional food is rising rapidly, and fruit wines, being considered a functional drink, are attracting the attention of winemakers and consumers. Kiwifruit (*Actinidia deliciosa*) has a good source of vitamin C, exceeding that of orange, pear and apples. In this study, Optimization of process conditions for alcoholic wine production from Kiwifruit (*Actinidia deliciosa*) was achieved using 2 level full factorial designs with centre points. The factors that were considered were pulp, initial sugar concentration, and yeast (*Saccharomyces cerevisiae*) concentration with specific gravity of the wine as the response. Fermentation was carried out in two separate temperature conditions i.e. ambient temperature and controlled temperature(29°C) inside the incubator. The raw materials (kiwi pulp) was analysed for TSS, pH, Vitamin C, titrable acidity and reducing sugar content prior to fermentation. During the primary fermentation period TSS, pH, and acidity were analysed at the interval of 2 days and specific gravity was analysed after the primary fermentation.

The statistical tools confirmed curvature to be significant which showed that higher order model can predict the process well when augmented to the Response Surface Method that estimates quadratic terms. Linear model generated can be used to predict response at the factorial points only because of the significant curvature. Minimization optimization predicted specific gravity of the wine to be 0.9780 at 75% of pulp content, initial sugar concentration of 24%, and yeast concentration of 0.706% at desirability of 0.9757.

The optimum conditions were validated with little error of 0.14% confirming the adequacy of the model in predicting the process.

***Keywords: Specific Gravity, Factorial design, Saccharomyces Cerevesiae.***

***Paper Code : QFT-03***

## **Evaluating Butter Cookie Brands in Nepal: Price vs Quality Analysis**

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### ***Abstract***

Competitive market of cookies industry creates the existence of cookies of various brands and among those brands we can find cookies having same net weight but differ in price. This cause of difference in price range are not stated clearly and remains unstudied. This research aimed to compare and correlate the quality parameters and price of butter cookies manufactured in Nepal of different brands. The experiment was conducted as a completely randomized design with five replicates. The data were statically analyzed using single factor (ANOVA) at 5% level of significance. The mean moisture content, total ash, Acid insoluble ash, Crude fat, Crude fiber, Acidity of extracted fat as oleic acid, Crude protein, carbohydrate and energy value of sample A, B and C were found to be (3.82,4.04 and 3.64) %, (1.64,1.72 and 1.95), (0.09,0.13 and 0.07), (19.52,20.30 and 22.89), (1.82,1.52 and 2.16), ( 1.2, 1.60 and 0.86), (6.41,6.05 and 8.027) and (66.78,66.35 and 61.34)% and (150.03,149.95,151.01) g and (5.49,5.86 and 3.12) respectively. The packaging material cost of sample A, B and C were found to be Rs. (2.74,1.47 and 4.7) respectively. All these parameters were tested at 5% level of significance. Overall from the study and correlation, it was found that higher the price of the cookies (sample C), higher were the value of crude protein, crude fiber, total ash, crude fat and energy value with higher packaging material cost and less acid insoluble ash and acidity of extracted fat than that of cookies with lower price (sample B and sample A). This research demonstrates the correlation of price and quality parameters for the benefits of consumers and to bring fair consumer purchase.

***Keywords: Nepalese cookie market, Competition, Net weight, Price variation, Quality parameters, Brand comparison, Statistical analysis, Packaging cost***

**Paper Code : QFT-04**

## **Factors Affecting Millet Production in Nepal**

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### ***Abstract***

Climate change is a growing threat to food production, especially in developing countries like Nepal. Nepal faces challenges with poverty and hunger. Millets, a key cereal crop in Nepal, have the potential to address these issues due to their versatility and suitability for Nepal's climate and geography. This study investigated factors influencing millet production in Nepal from 1988 to 2019. We used advanced statistical methods to analyse the data. Our findings show that fertilizer use, cultivated area, and rural population size significantly impact millet production. Interestingly, average temperature had a negative but insignificant impact, suggesting that climate change may not have significantly affected millet production during this period. However, with the growing awareness of climate change's impact on agriculture, temperature may play a larger role in the future. These findings are valuable for Nepalese policymakers aiming to improve food security in a weakening hunger index scenario. The study recommends protecting land dedicated to millet cultivation and encouraging young people to stay in rural areas to maintain a strong agricultural workforce.

***Keywords: Cultivated Area, fertilizer, mean temperature, rural total population***

**Paper Code : QFT-05**

## **Nutritious Food Choices among Pediatric Cancer Patients**

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### ***Abstract***

The main objective of the paper is to discuss the role of nutritious food in curing pediatric cancer in Nepal. Malnutrition is common in childhood cancer. The prevalence of children under five with stunting and wasting is 36 % and 9.6% respectively. Malnutrition further rises among older children. More than half of patients are diagnosed with wasting or stunting while diagnosed with cancer in child cases. In Nepal, an estimated 900 children are diagnosed with cancer and only one-third of childhood cases receive treatment. Childhood cancer has a higher chance of cure than in adults, with around 85% survival rate in developed countries, though; the survival rate in many low and low-middle-income countries in South-East Asia region is less than 40% due to lack of care, lack of diagnostic services and trained health personnel, especially in a primary care setting, financial hardship, etc. The role of nutritious food is important in curing pediatric cancer patients as it prevents malnutrition and makes a well-built immune system. During the treatment, loss of appetite can be seen and the role of nutritious food is important in this regard.

***Keyword: Nutritious food, pediatric cancer, malnutrition, Nepal***

## **Orchid Insights: A Multidisciplinary Journal of Orchid College.**

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6. Figures, tables, and equations should be numbered consecutively and included in the appropriate place within the text.

7. References should be listed at the end of the manuscript in APA style, with each reference cited in the text.
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