Report of

Three –Day National Level Online Workshop on

"DNA Barcoding"

22nd to 24th May, 2020

Organized by

PG & RESEARCH DEPARTMENT OF BIOTECHNOLOGY

ISLAMIAH COLLEGE (AUTONOMOUS)

Vaniyambadi – 635 752

ORGANIZINGCOMMITTEE:

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Dr. A. Mahaboob Ali, Asst. Prof. of Biotechnology
Dr. N. P. M. Md. Tariq, Asst. Prof. of Biotechnology
Dr. M. A. Farook, Asst. Prof. of Biotechnology
Mr. N. Shabeer Ahmed, Asst. Prof. of Biotechnology
Mr. I. Aadil Ahmed, Asst. Prof. of Biotechnology

Acknowledgment

We would like to acknowledge the patrons and support of good wishers
Chief Patron : **Mr. Mouda Ahmed Basha,** President, VME Society
Patrons : **Mr. Ghani Mohammed Azhar,**General Secretary, VME Society
Mr. L.M. MuneerAhmed,Secretary& Correspondent, Islamiah College
President : **Dr. T. Mohamed Ilyas,** Principal, Islamiah College

Thanking you,

Organizing Secretary,
PG & Research Department of Biotechnology,
Islamiah College (Autonomous),
Vaniyambadi – 635 752.

Background

We are all in the midst of an extraordinary situation resulting from the global pandemic COVID 19 and the consequent lockdown. With this unprecedented incident, everything stopped suddenly and the academic world is no exception. Due to the forced closure of educational institutions, the whole higher education system has been disturbed. In such a situation, e-learning has emerged as the most effective option, both for students / teachers and for college / university management.

Keeping this in mind, the Department of Biotechnology, Islamiah College (Autonomous), Vaniayambadi organized a 3 Day National level online workshop on DNA Barcoding from 22nd to 24th May 2020 for the students, research scholars and even faculty members of various capacities in life sciences. The workshop is a three-day long event and concluded on Sunday, May 24, 2020.

Objectives of the workshop

The main objective of this virtual workshopis to give and insight about DNA Barcoding. The online workshop aims to increase academic stakeholders' capacity and knowledge on how to perform and develop DNA barcodes for different kinds of animals and plants.

Executive summary of the workshop

A total of 2448 applications from faculty members, research scholars, students and industrial personnel fromvarious institutions, universities, research institutes and industries across the nation were received.

The scrutinizing committee shortlisted the applications based on the following criteria:

1. Those who are doing research in DNA barcoding
2. Those whose research field in taxonomy and diversity of flora and fauna

3. Those who are interested in molecular taxonomy
4. Those who are research scholars and final year students of both UG and PG

Finally a total of 950 participants were selected for this programme. These 950 participants comprising of students, research scholars and even faculty members from national and state level colleges and universities joined the workshop virtually. The workshop was being organised at a time when all educational institutions are taking the e-learning route to complete the syllabus due to COVID-19 lockdown.

This provided an excellent opportunity to focus on basics to recent developments on DNA Barcoding and establish new collaborations in these areas. This workshop highlighted multidisciplinary perspectives to interested biotechnologists, microbiologists, biochemists, zoologists, taxonomist, non-taxonomists, parataxonomists, sustainability researchers and academicians. This technical get together provided a platform for potential knowledge exchange on recent trends, theories and practices in the field of molecular taxonomy.

PROGRAMME SCHEDULE

Day 1: 22/05/2020	
10.00 am to 10.45 am	: **An Overview of DNA barcoding** Dr. H.Abdul Jaffar Ali M.Sc., M.Phil., Ph.D. Assistant Professor of Biotechnology Islamiah College (Autonomous), Vaniyambadi 2 (TN)
11.00 am to 11. 30 am	: **DNA barcoding of fish** Dr. A. KathirvelpandianM.F.Sc., Ph.D. Office in Charge, Institute of Fisheries Biotechnology Associate Professor and Head, Division of Fisheries Biotechnology Institute of Fisheries Post Graduate Studies (IFPGS) Tamilnadu Dr. J. Jayalalithaa Fisheries University, Chennai
11.45 am to 12 noon :	**Collection and preservation of samples for molecular study** Dr. H. Abdul Jaffar Ali M.Sc., M.Phil., Ph.D. Assistant Professor of Biotechnology Islamiah College (Autonomous), Vaniyambadi 2 (TN)
Day 2 : 23/05/2020	
10.00 am to 10.30 am	**Isolation of whole genomic DNA from the tissues** Mr. I. Aadil Ahmed M.Sc. M.Phil., Assistant Professor of Biotechnology Islamiah College (Autonomous), Vaniyambadi 2 (TN)
10.45 am to 11.15 am	**Quantification of isolated DNA** Dr. B. Kaleemullah Khan M.Sc., M.Phil., Ph.D Plant Manager and Regulatory Manager Helico International (Medical Device Company) Bangalore.
11.30 am to 12 noon	**PCR amplification of DNA barcode gene** Dr. M.A. Farook M.Sc., M.Phil., Ph.D Assistant Professor of Biotechnology Islamiah College (Autonomous), Vaniyambadi 2 (TN)

12.15 pm to 1.00 pm	**Quality check of amplicon in AGE and Gel Doc** Mr. N. Shabeer Ahmed M.Sc., M.Phil., (Ph.D) Assistant Professor of Biotechnology Islamiah College (Autonomous), Vaniyambadi 2 (TN)
Day 3: 24/05/2020	
10.00 am to 10.30 am	**Gene sequencing** Mr. N. Shabeer Ahmed M.Sc., M.Phil., (Ph.D) Assistant Professor of Biotechnology Islamiah College (Autonomous), Vaniyambadi 2 (TN)
10.45 am to 11.15 am	**Submission of CO1 gene sequences in GenBank, NCBI** Dr. H. Abdul Jaffar Ali M.Sc., M.Phil., Ph.D Assistant Professor of Biotechnology Islamiah College (Autonomous), Vaniyambadi 2 (TN)
11.30 am to 12 noon	**Homology search in BLAST** Mr. N. Shabeer Ahmed M.Sc., M.Phil., (Ph.D) Assistant Professor of Biotechnology Islamiah College (Autonomous), Vaniyambadi 2 (TN)
12.10 pm to 12.30 pm	**Applications of DNA Barcoding in Plants** Dr. N.P.M. Mohammed Tariq M.Sc., M.Phil., Ph.D Assistant Professor of Botany Islamiah College (Autonomous), Vaniyambadi 2 (TN)
2.00 pm to 3.00 pm	**Quiz and Feedback**

Virtual Workshop portals:

This virtual workshop was conducted through three different portals.

1. **Google Class Room –**

   A total of 750 participants comprising of 296 faculty members, 196 research scholars and 258 students joined though the Google class room and benefited.

2. **Islamiah College Learning Resource Management System**

   Additionally, about 200 participants inclusive of 30 faculty members 34 research scholars and 136 students registered through this portal. Besides, the some participants of Google Class Room also entered this portal making the count of total participants to 531.

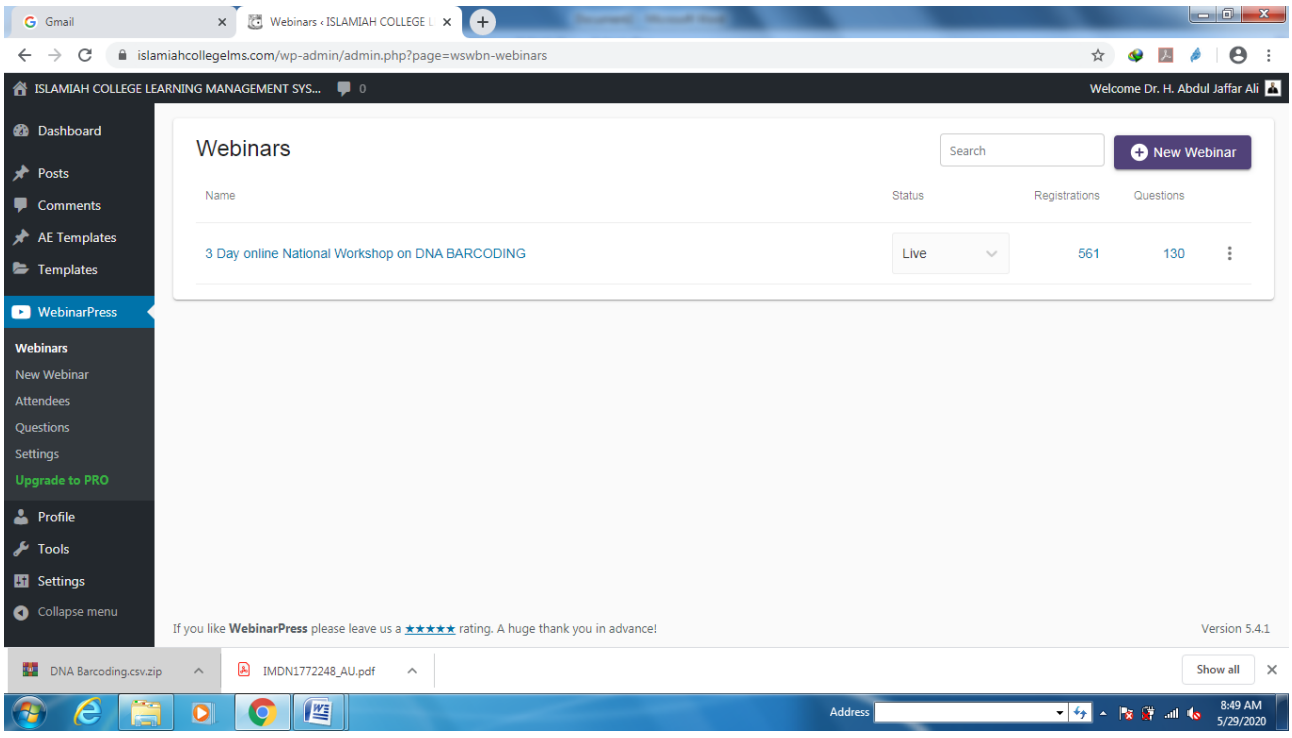
3. **YouTube link through WhatsApp group:**

   All the participants were sorted out according to their capacity and formed WhatsAppgroup. The YouTube links of every session were shared in each group.

S. No	Sessions	You tube link
1	About the programme	https://youtu.be/vda-uEQWmz4
2	An Overview of DNA barcoding	https://youtu.be/X_BjDiRE2mQ
3	DNA barcoding of fish	https://youtu.be/WOCmJ8ilDXA
4	Collection and preservation of samples for molecular study	https://youtu.be/lm8uHFemf3A
5	Isolation of whole genomic DNA from the tissues	https://youtu.be/qkcnvhX-P44
6	Quantification of isolated DNA	https://youtu.be/LnYl-AzZFjM
7	PCR amplification of DNA barcode gene	https://youtu.be/Tjhrvta4y5M
8	Quality check of amplicon in AGE and Gel Doc	https://youtu.be/edIFE_arTD4 https://youtu.be/Z6isiRW5wIs
9	Gene sequencing	https://youtu.be/Sy71B4K0K4A
10	Homology search in BLAST	https://youtu.be/HwZqT7H4TVs https://youtu.be/neoMcLZv2Wo
11	Submission of CO1 gene sequences in GenBank, NCBI	https://youtu.be/7XiqbzY0-Qo
12	Applications of DNA Barcoding in Plants	https://youtu.be/uZ_TfMsbTxk

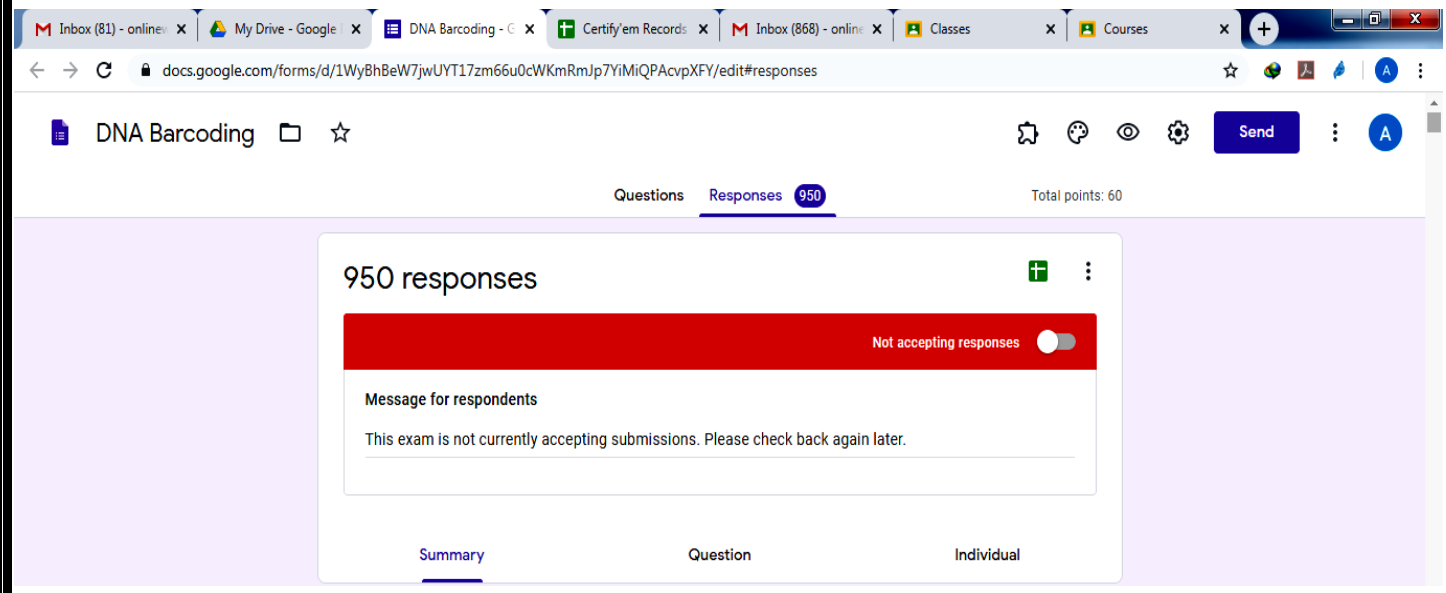
Google Class Room Portal:

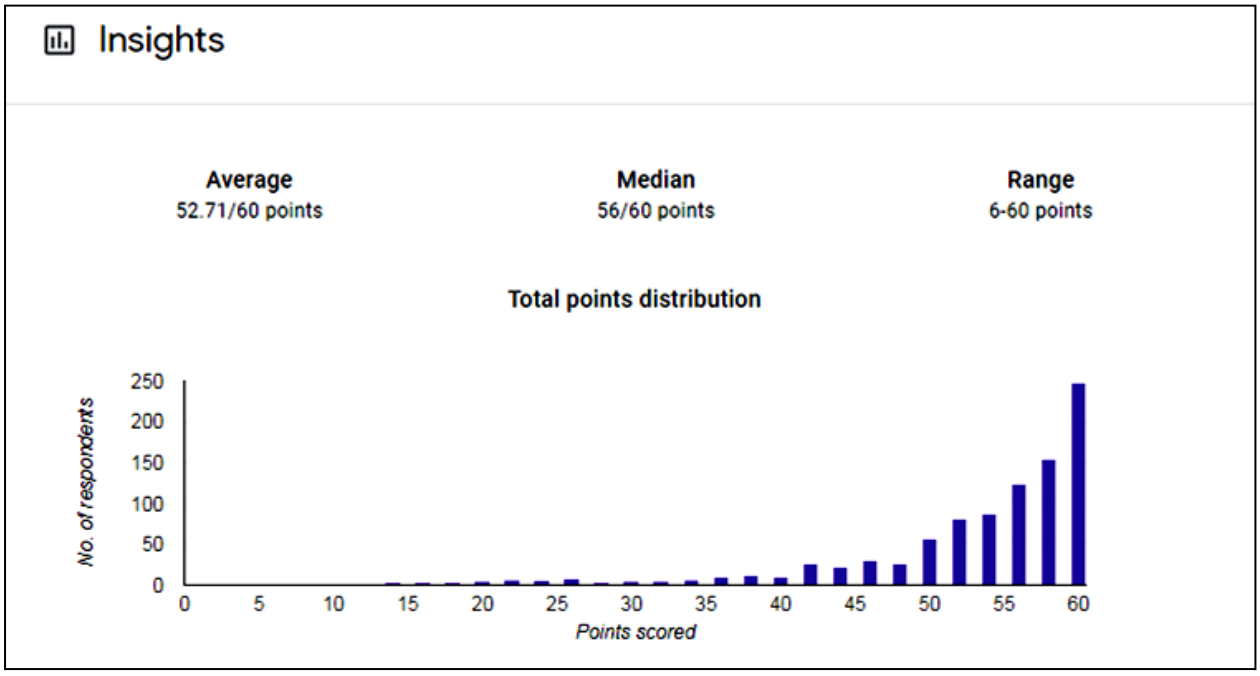
Islamiah College Learning Management System portal:



A panoramic view of virtualworkshop:

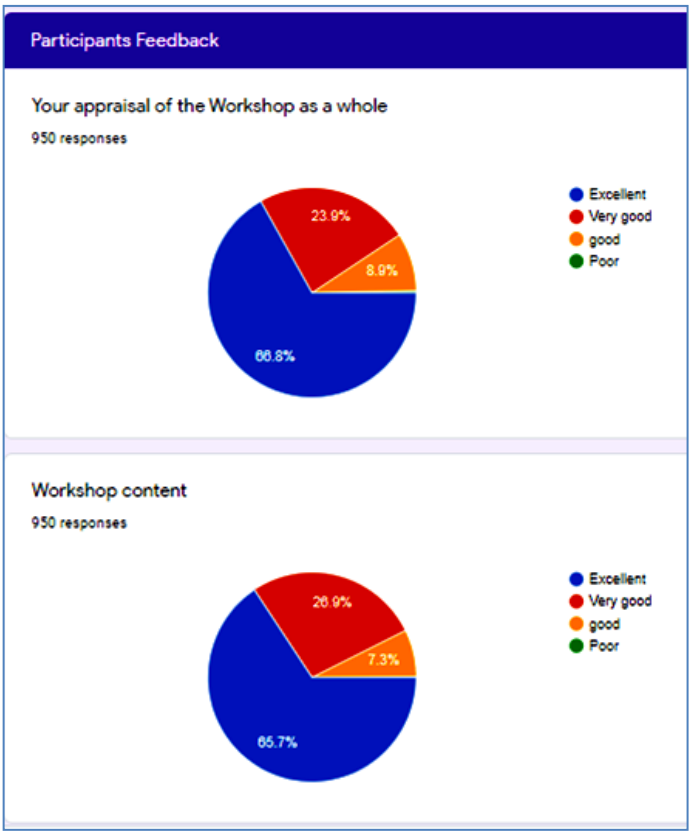
Let's take a look at virtual workshop reality from a bird's eye view. We analyzed our data carefully and summarized all the online events held on the virtual workshop platform.

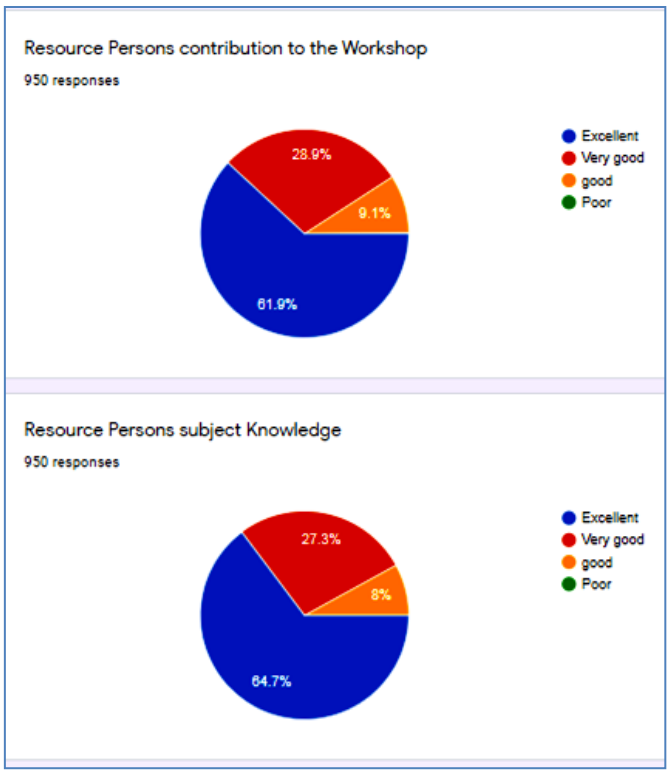


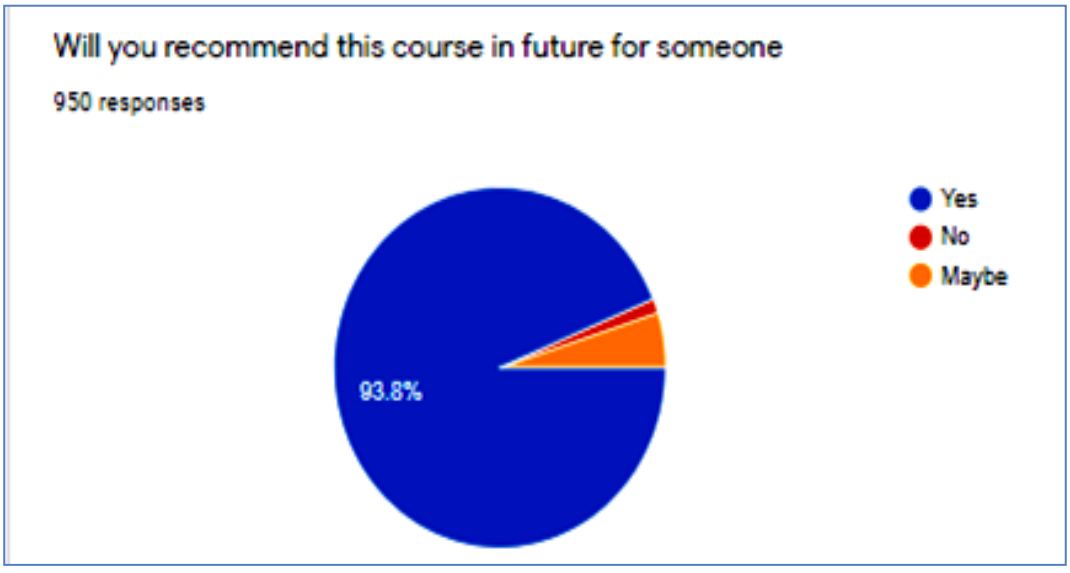


Feedback from the participants:

Based on the feedbacks received by Google Form, it could be concluded that all the participants are very much satisfied with the virtual workshop. Our Department received high appreciation from the participants in conducting this programme and many participants have requested us to conduct Hands on Training on DNA Barcoding in future.

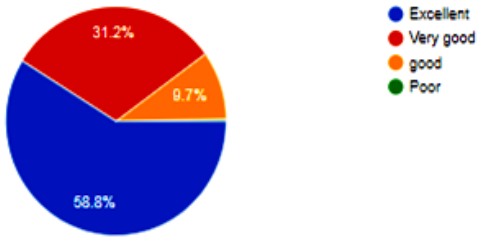






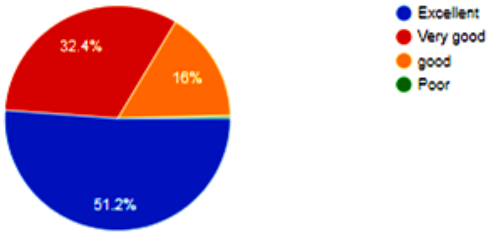
Encouragement given to the participants from the organizers

950 responses



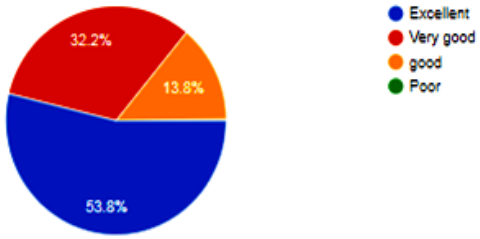
Time management

950 responses



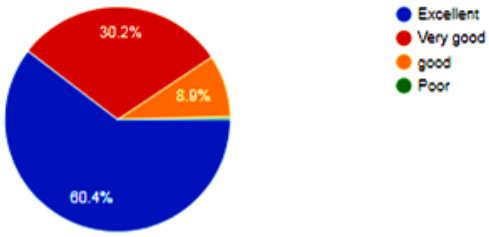
Clarification of doubts/ questions by the resource persons

950 responses



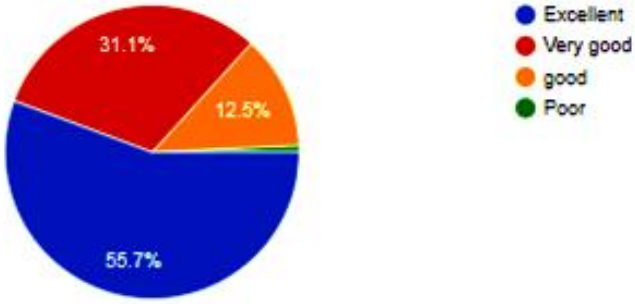
The qualifications and expertise of the resource persons

950 responses



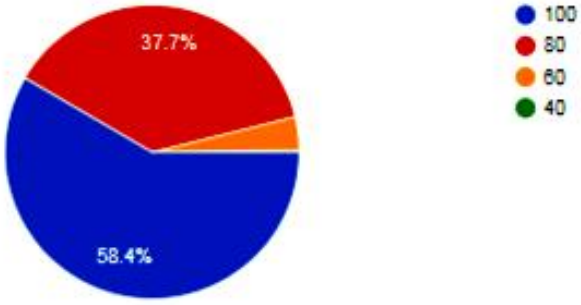
Quality of Power Point Presentations

950 responses



Percentage you will assign to this course

950 responses



Conclusion:

The resource persons shared lots of knowledge and information about DNA barcoding techniques and its wide applications.It was an informative and learning session for all the participants. Participants asked many queries from the resource persons and they responded to all the doubts.

It is resolved to conduct a separate "Hands on training" for DNA barcoding technology protocol and Bioinformatics tools used in DNA barcoding.

THANK YOU

Dr. H. Abdul Jaffar Ali

Organizing Secretary