INDIRA GANDHI NATIONAL OPEN UNIVERSITY
SCHOOL OF AGRICULTURE

REPORT ON THE FEEDBACK OF SUBJECT EXPERTS ON THE DESIGN, DEVELOPMENT AND DELIVERY OF CURRICULUM

1.0: PREAMBLE
Feedback is pivotal in success of any programme. Feedback from all the stakeholders helps in improving the development and delivery of any Open and Distance Learning (ODL) programme. Feedback not only helps in improving the teaching-learning process, but also helps in updating/restructuring the curriculum as per the needs and requirements of 21st century learner. Feedback analysis mechanism is an essential tool in ensuring the quality assurance of programmes and it has to be obtained from all the stakeholders in the system. One of the stakeholders is the Subject Experts who are involved in the designing and development of the curriculum. They are the link between field reality and the learners. Their feedback will help in improving the process involved in designing and development of curriculum of new programmes and revision of the existing programmes.

The unprecedented Pandemic has impacted the teaching- learning process, the world over. Consequently, the University has been trying different alternatives to enrich the academic experience of its learners. Since the lockdown conditions had restricted delivery of the self-learning material (SLM) to the doorsteps of the learners, the University provided soft copy of the SLM through IGNOU eContent Mobile App, eGyankosh and lectures on the YouTube wherever feasible. For providing counselling services, electronic communication channels namely Gyan Darshan, GyanVani, GyanDhara, and Web-enabled Academic Support (WEAS) were used to reach out to the learners in an effective and best possible effective way. Efforts were made to restore academic counselling by making use of Facebook live, Google Meet, WebEx, Zoom and YouTube.

Keeping this in view, efforts were made to obtain the feedback from the Subject Experts who were involved in the designing of curriculum and development of Self Learning Materials (SLMs) of various programmes developed by the SOA, IGNOU. The University sought the valuable feedback on how best it can eliminate the potential barriers between the learner and institution by designing, developing/revising and delivering the updated course content.

ABOUT THE SCHOOL AND EXPERTS INVOLVED
The School of Agriculture which came into existence during the year 2005 has so far developed 21 programmes ranging from Awareness to Doctorate levels in Agriculture and Allied Areas. The programmes developed by the School till date include FOUR Awareness Programmes (Non-credit) in the areas of Dairy Farming, Value Added Products from Fruits and Vegetables, Betel Vine and Integrated Pest Management Technology in Potato Cultivation; FIVE Certificate Programmes in the areas of Organic Farming, Sericulture, Poultry Farming, Water Harvesting & Management and Bee Keeping; SEVEN DiplomaProgrammes in the areas of Horticulture, Value Added Products from Fruits & Vegetables, Dairy Technology, Meat Technology, Production of Value Added Products from Cereals, Pulses & Oilseeds, Fish Products Technology and Watershed Management; ONE PG Certificate in Agriculture Policy; THREE PG Diploma Programmes in the areas of Plantation Management, Food Safety & Quality Management and Food Science & Technology; and TWO Doctorate Programmes in the areas of Agriculture Education and Dairy Science &

Technology. The Programmes were conceptualized and planned by the School's In-house Faculty and the curriculum were designed and developed with the support of outside experts from different parts of the country cutting across the disciplines. The subject experts who are renowned in their specialization with vast experience in Teaching/Research/Extension mostly from Educational Institutions, ICAR Institutes, Universities/Colleges, Extension Organizations, Industry, Government/NGO Organizations etc. were involved in designing and development of curriculum.

METHODOLOGY

For collecting the Feedback response from the Subject Experts, Feedback Questionnaire Form developed by the Centre for Internal Quality Assurance (CIQA) of the University was used. The Feedback form/Questionnaire included questions related to General Information of about the respondents *viz.*age, educational qualification, institution you are working/affiliated with, name of the Programme involved in and number of years you are associated with IGNOU; and 20 statements having five-point Likert scale ranging from Strongly Agree to Strongly Disagree for measuring the respondents' agreement with various statements related to the design and developmentof the curriculum, delivery of the programme and assessment of the learners.The questionnaire also included two open-ended questions on the alternative mode of evaluation for distance learners who do not have their own electronic device and the tools suggested by the experts for internal assessment of learners in case the Term end examination are MCQ based. An Online Feedback Questionnaire created in the Google Form platform was circulated among the Subject Experts. A total of 35 responses were received from the Subject Experts with different specializations/disciplines. The responses were collated, analyzed and presented below.

FEEDBACK OF THE SUBJECT EXPERTS

The feedback responses received from the Subject Experts are present in two parts: A) General Information of the respondents and B) Feedback on the improvement of the pedagogy.

A) GENERAL INFORMATION

The feedback response regarding the general information of the respondents are presented below:
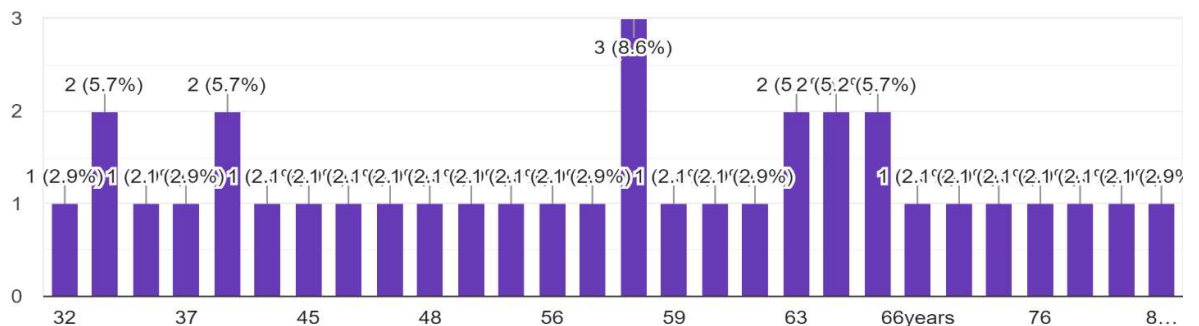
a) Age of the respondents:

Fig. 1: Age of the respondent

All the respondents were above 32 years of age and majority belonged to the age group of 40 to 66 years (Fig. 1).
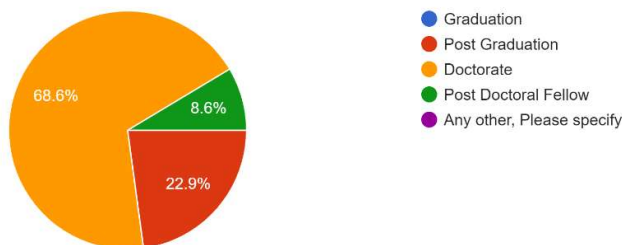
b) Highest Educational Qualification:

Legend:
- Graduation
- Post Graduation
- Doctorate
- Post Doctoral Fellow
- Any other, Please specify

68.6% — 22.9% — 8.6%

Fig. 2: Highest Educational Qualification of the respondents

About two-third (68.6%) of the respondents were having Doctorate degree, 22.9% were post graduates and 8.6% were Post-Doctoral Fellow. **(Fig. 2).**

c) Institutions the respondents are/were working/affiliated with

4 (11.4%)

1 (2.1)(2.1)(2.1)(2.1)(2.1)(2.1)(2.1)(2.1)(2.1)(2.9%)1 (2.1)(2.1)(2.1)(2.1)(2.1)(2.1)(2.1)(2.1)(2.1)(2.1)(2.1)(2.1)(2.1)(2.1)(2.1)(2.9%

Ayurvet — Central Silk Board,... — FSSAI — ICAR (ARS 1986)... — INDIAN COUNCIL... — Indira Gandhi Kris... — Lady Irwin College — Odisha University... — Regional Sericultur... — SUPERANNUATE... — WTC, IC...
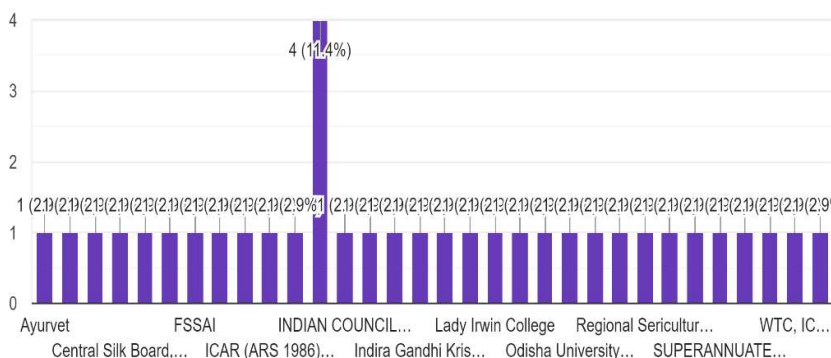
Fig. 3: Institutions the respondents are/were working/affiliated with

The subject experts were/are associated with various institutions like Indian Council for Agriculture Research (ICAR), Food Safety and Standard Authority of India (FSSAI), Ayurvet, Regional Sericulture Institute, Water Technology Centre (ICAR), Indira Gandhi Krishi Vigyan Kendra, Lady Irwin College, Odisha University of Agriculture etc. 13.5% of the respondents were from ICAR system. **(Fig. 3).**

d) Name of the Programme involved in:

- Awareness Programme on D... — 4 (11.4%)
- Awareness Programme on V... — 3 (8.6%)
- Certificate in Organic Farmin... — 3 (8.6%)
- Certificate in Poultry Farmin... — 3 (8.6%)
- Certificate in Sericulture (CIS) — 5 (14.3%)
- Certificate in Water Harvesti... — 3 (8.6%)
- Certificate in Beekeeping (CIB) — 1 (2.9%)
- PG Certificate in Agriculture... — 2 (5.7%)
- Diploma in Value Added Pro... — 7 (20%)
- Diploma in Dairy Technology... — 6 (17.1%)
- Diploma in Meat Technology... — 4 (11.4%)
- Diploma in Production of Val... — 2 (5.7%)
- Diploma in Fish Products Te... — 2 (5.7%)
- Diploma in Watershed Mana... — 6 (17.1%)
- Diploma in Horticulture (DH... — 1 (2.9%)
- Diploma in Animal Husbandr... — 4 (11.4%)
- PG Diploma in Plantation Ma... — 0 (0%)
- PG Diploma in Food Safety... — 10 (28.6%)
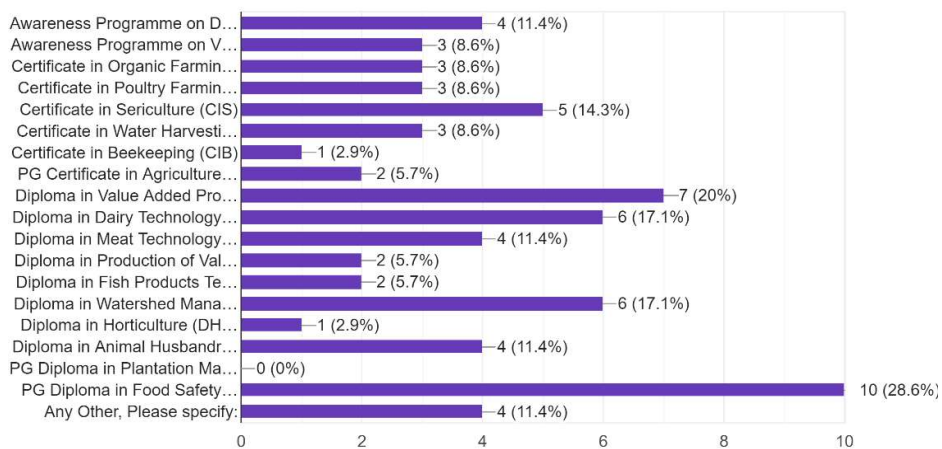- Any Other, Please specify: — 4 (11.4%)

Fig. 4: Name of the Programme the experts are involved in

Majority of the respondents(28.6%) were involved in PG Diploma in Food Safety and Quality and Management programme, followed by Diploma in Value Added products from Fruits and Vegetables (20%), Diploma in Dairy Technology(17.1%) and Diploma in Watershed Management (17.1%), Diploma in Meat Technology (11.4%) and so on. There was no response from any of the experts involved in PG Diploma in Plantation Management**(Fig. 4).**

e) Number of years you are associated with IGNOU:
The association of the respondents with IGNOU ranges from 1 year to 25 years. **(Fig. 5)**
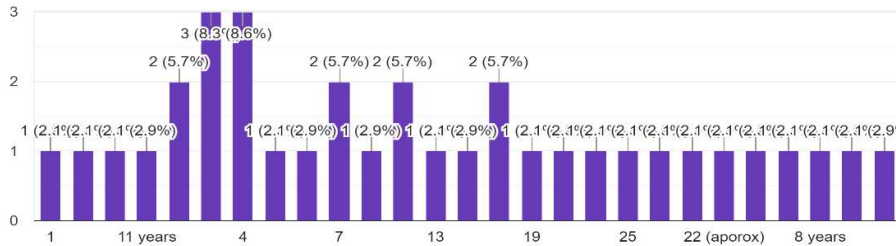

Fig. 5: Number of years the experts are associated with IGNOU

B) FEEDBACK ON DESIGN AND DEVELOPMENT OF THE CURRICULUM, DELIVERY OF THE PROGRAMME AND ASSESSMENT OF THE LEARNERS.
Feedback received from the Subject Experts on the design and development of curriculum, delivery of the programme and assessment of the learnersare depicted in graphical form:

1) The level of the programme and curriculum are as per the learner's and industry requirements.
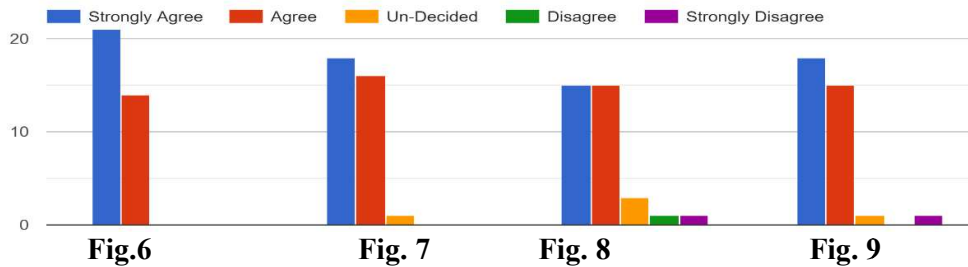
Majority of the respondents (60%) strongly agreed and 40% of them agreed that the level of the programme and curriculum are as per the learner's and industry requirements (**Fig. 6**).

2)**The curriculum covers recent and emerging topics/subjects/areas**.
Majority of the experts (51.4%) strongly agreed and 45.7% of them agreed that the curriculum covers recent and emerging topics/subjects/areas. No one disagreed with the statement (**Fig. 7**).

3) **With increasing use of technology and the internet usage, eSLM has the ability to replace the printed SLM.**
About 86 % of the experts were in opinion that the eSLM has the ability to replace the printed SLM with the increasing use of technology and the internet usage. But 6% of the respondents disagreed with the statement. (**Fig. 8**).

4) Use of eSLM (eGyankosh, IGNOU eContent App) can augment the updating and delivery of the SLM.

The majority of the experts (51.4%) strongly agreed and 43% of them agreed that the use of eSLM (eGyankosh, IGNOU eContent App) can augment the updating and delivery of the SLM. Only one respondent strongly disagreed with the statement. **(Fig. 9).**

5)Use of web-based academic support (like WEAS: Web-enabled Academic Support, a one-stop portal, online counselling, YouTube/ Facebook live) will strengthen the pedagogy.

Fig. 10 Fig. 11　　　Fig. 12　　　Fig. 13　　　Fig. 14　　　Fig. 15
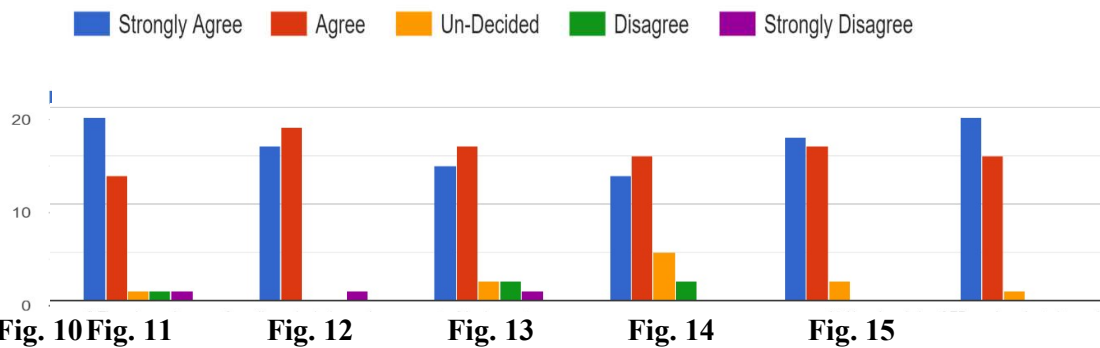
About 54% of the experts strongly agreed with the statement, 37% agreed, 3% disagreed and 3% strongly disagreed with the statement. **(Fig 10).**

6)There is ample scope for online submission and assessment of Assignments:

The majority of the respondents either strongly agreed or just agreed that there is ample scope for online submission and assessment of Assignments, only one respondent strongly disagreed.(**Fig. 11**).

7) Extensive use of technology (online counselling, use of social media etc.) will have positive impact on the learning outcome:

As per the feedback of the majority of the experts, extensive use of technology (online counselling, use of social media etc.) will have positive impact on the learning outcome. Very few respondents disagreed with the statement. **(Fig. 12).**

8)Learners can be provided with the electronic gadgets like Tablet loaded with eSLM which can also be used for attending online counselling sessions:

Total 80% of the experts think thatthe learners can be provided with the electronic gadgets like Tablet loaded with eSLM which can also be used for attending online counselling sessions. (**Fig. 13**).

9) In case gadget is provided to the learners, App should be developed which can help the learner to monitor his/her progress and suggest/recommend corrective measures:

The majority of the respondents (94%)strongly agreed/agreed with the statement**. (Fig. 14).**

10)Self Assessment Questions in the SLM should be thought provoking (like scramble words, analyze the graph, crossword etc.) instead of simple objective or subjective questions which only help in recalling the content:

About 95% of the experts strongly agreed/agreed that the Self Assessment Questions in the SLM should be thought provoking instead of simple objective or subjective questions **(Fig. 15).**

11) Already existing OER can be adopted to replace the new programme/course development or updating the existing courses:
Majority of the experts (57%) agreed and 26% of them strongly agreed that the already existing OER can be adopted to replace the new programme/course development or updating the existing courses.**(Fig. 16**).
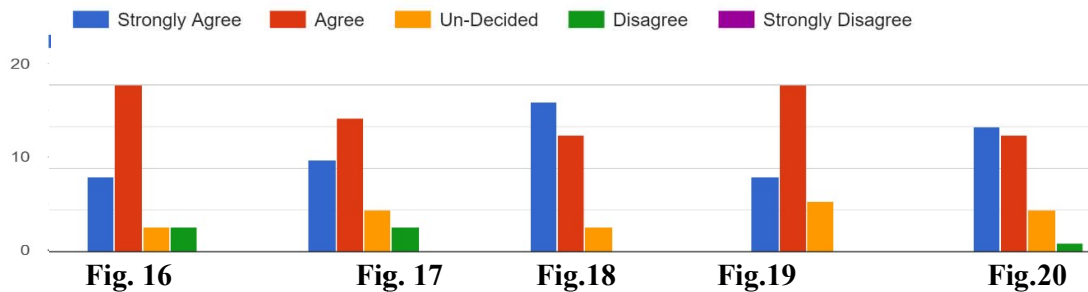
| **Fig. 16** | **Fig. 17** | **Fig.18** | **Fig.19** | **Fig.20** |

12)MOOCs can be adopted as replacement to the development of new course/revision of existing courses:
Total 77% of the respondents thought that MOOCs could be adopted as replacement to the development of new course/revision of existing courses, but few experts disagreed with the statement. (**Fig. 17**).

13)**Course writing/editing/revision can be done online through cloud which can be accessed simultaneously by different experts:**
Majority either strongly agreed and just agreed that the Course writing/editing/revision can be done online through cloud which can be accessed simultaneously by different experts. **(Fig. 18).**

14)**All existing SLM should be converted to ePubformat** :
Though majority of the respondents agreed with the statement but 17% of them were undecided**. (fig. 19).**

15) Meetings for course design and development as well as revision can be done online instead of face to face mode.:
Majority of the experts (83%) were in agreement with the statement that Meetings for course design and development as well as revision can be done online instead of face to face mode. (**Fig. 20).**

16) **Training for course writing, editing, vetting and translation can be done entirely online**:
Only 8% of the experts disagreed , but majority of them (74%) agreed that the training for course writing, editing, vetting and translation can be done entirely online (**Fig. 21**).
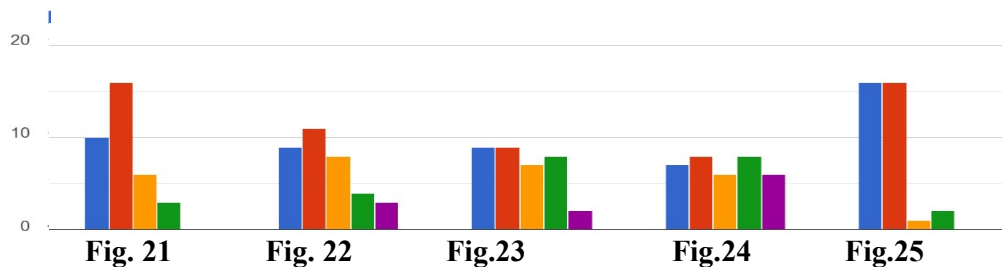
| | Fig. 21 | Fig. 22 | Fig.23 | Fig.24 | Fig.25 |

17) Online and on-demand term-endexamination should replace pen and paper based examination:
About 57% of the respondents thought that online and on-demand term-endexamination should replace pen and paper based examination , but there were few experts who were undecided or disagreed with the statement (**Fig. 22**).

18) The weightage of internal assessment should be increased to more than 50% from the current 25-30%:
More than half of the respondents thought that the weightage of internal assessment should be increased to more than 50% from the current 25-30%. At the same time, 29% of them did not agree with the statement.**(Fig. 23).**

19)Questions for term-end examination should be completely MCQ based:
Almost 43 % of the respondents agreed and 40% disagreed with the statement; and 17 % of them were undecided.(**Fig. 24**).

20) Questions for term-end examination should be a mix of MCQ and subjective type questions:
Majority of the respondents (91%) were in favour of the proposal for a mix of MCQ and subjective type questionsfor term-end examination**(Fig. 25).**

ANALYSIS OF THE FEEDBACK RECEIVED
The responses received from the Subject Experts on the General information revealed that majority of them were above 40 years of age, having Doctoral degree and vast teaching/industry experience in their respective fields. They are also associated with IGNOU programmes quite a long time. This indicates that the Subject Experts involved in designing and development of Curriculum were renowned/Senior Academicians/Professionals in different disciplines from reputed Institutions, industry and other Central and State Government Institutions.

Analysis of the responses received from the Subject Experts regarding the "Feedback for improving the pedagogy" reveal the following:

Level of the programme/curriculum and coverage of recent and emerging topics/subjects/areas:
It is evident from the results that majority of the experts felt that the level of the programme and curriculum are as per the learner's and industry requirements. This signifies that curriculum is designed and developed keeping in view the target group and level of the programme. It was also expressed by them that the curriculum was updated and covers recent and emerging topics/subjects/areas.

Course design and development activities online: The results indicated that majority of the experts were in favour of online meetings for course design, development, revision and also for the training for course writing, editing, vetting and translation. This would definitely save the time and money for course development and also ensure maximum participation of the experts who sometimes can't attend the face to face meeting. They also opined that course writing/editing/revision work also can be done online through cloud which can be accessed simultaneously by different experts. This would also ensure faster completion of the work than doing all these offline.

Use of OER, MOOCs to replace new course development or revision: As per the feedback of the experts, existing OER and MOOCs could be adopted as replacement to the development of new course/revision/updating of existing courses. This would help to reduce the course development and revision time and also avoid the unnecessary time and efforts investment for the duplication of already existing resources.

Use of eSLM:
The results showed that the eSLM(eGyankosh, IGNOU eContent App)has the ability to replace the printed SLM with the increasing use of technology and the internet usage.The experts also opined that the eSLM can augment the updating and delivery of the SLM.

Availability of the SLM in ePub format: Majority of the experts felt that all existing SLM should be converted to ePub format. This would enhance the accessibility of the SLM to the learners.

Use of Technology and web-based academic support:
The experts expressed that the Web-enabled Academic Support (WEAS), online counselling, YouTube/ Facebook live etcwould strengthen the pedagogy.They also opined that extensive use of technology (online counselling, use of social media etc.) would have positive impact on the learning outcome. All these technology and web based supports are proved to be very effective during the pandemic covid 19 situation.

Online submission and assessment of Assignments:
the results showed that there is ample scope for online submission and assessment of Assignments. This has also been proved during this covid situation.

Provision of electronic gadgets like Tablet loaded with eSLMand App:
The experts thought thatthe learners can be provided with the electronic gadgets like Tablet loaded with eSLM which can also be used for attending online counselling sessions. In that case, App should be developed which can help the learner to monitor his/her progress and suggest/recommend corrective measures.

Self Assessment Questions in the SLM: The experts felt that self -assessment questions in the SLM should be thought provoking like scramble words, analyze the graph, crossword etc. instead of simple objective or subjective questions which only help in recalling the content. This would help the learners to assimilated the subject knowledge better and apply their analytical skills.

Examination: Majority experts were in favour of Online and on-demand term-endexamination instead of pen and paper based examination. It might be because of the present status of the education system throughout the country during pandemic Covid

situation. They also felt that the weightage of internal assessment should be increased to more than 50% from the current 25-30%. Probably this would help to lower the burden on the students at the term end examination. A significant number of experts were against only MCQ based term end examination. Rather, they favoured a mix of MCQ and subjective type questionsthan the present question pattern which is mainly based on objective and subjective questions.

SUGGESTIONS FOR IMPROVEMENT IN THE PEDAGOGY:
The following are some of the areas the Subject Experts have suggested that can be considered for improvement in the pedagogy:

 Alternative mode of evaluation for distance learners who do not have their own electronic device: The experts suggested the following:
- Paper pen traditional tests, Viva-voce (Physical) at study centers
- Answer sheets should be sent through mail.
- Provisions may be made at learning centres/they may use cyber cafe.
- Learners can be provided with electronic gadgets
- Electronic device can be arranged for the learners on easy instalment basis payment
- By post assignments and answer sheet can be checked i. e. Open book evaluation
- Electronic devices can be set for use by students in sub centres of IGNOU ,akshaya centres or even affiliated Educational institutions
- Learners can be associated with a cyber cafe through which they can submit their assignments
- Proctored online examination on selected NIC Centers.

They also expressed that traditional paper mode of examination should continue as an alternative. It is not only the availability of electronic device, but transparency and avoiding of unfair means in the examination are also to be considered.

The tools suggested for internal assessment of learners in case the Term end examination (TEE) are MCQ based:
- Tutor marked Assignments, Projects, Quizzes
- Oral Viva Voce examination online or Term paper presentation by the students online
- Modern smart tools capturing the potential of IT, ICT, IOT , BIGDATA platforms and even the retired experts in physical way too
- OMR sheet/ MCQ
- Google forms in mobile in a time bound manner
- Assignments that require thought process rather than textbook knowledge, solving numerical problems
- May be based on assignment/activity/project related to practical experience and application of the concept learnt.

Some of the experts also opined that the present pattern of internal assessment should continue.If the term end examination are MCQ based, there should be some assessment (in form of assignments/ projects, etc.) to understand the student's actual understanding of the subject. Special care is required to ensure that the students do not adopt any unfair means during appearing the examinations. Independent examiners can be assigned to conduct

online viva-voce to check the understanding. Very few experts categorically mentioned that the TEE should not be MCQ based.

CONCLUSION AND RECOMMENDATIONS:

Responses received from the Subject Experts clearly revealed that most of the respondents/Subject Experts either Strongly Agreed or Agreed to all the statements or parameters regarding the designing, development, delivery of the curriculum and assessment. Keeping in view the Feedback responses received from the Subject Experts, it is suggested to adopt the practice of online meeting for course design, development, revision and training of the experts; use of OER and MOOCs for new course development or revision wherever possible; maximum use of technology and web based academic support system for the delivery of the programme; make the eSLM available; use of alternative ways based on online facilities for conducting internal assessment and term end examination. In order to ensure quality and improve the effectiveness of programme development and delivery, the suggestions prescribed by the Subject Experts may be implemented.

FORMAT OF SEEKING FEEDBACK FORM FOR SUBJECT EXPERTS

Name of the Subject Expert:
Age:
Highest Educational Qualification:
Institution you are working/affiliated with:
Name of the Programme involved in:
Number of years you are associated with IGNOU:
Your feedback is important to improve the pedagogy. Kindly give your feedback on the following statements:
 SA: Strongly Agree, A: Agree, UD: Un-Decided, DA: Disagree, SDA: Strongly Disagree

S. No	Statement	SA	A	UD	DA	SDA
1.	The level of the programme and curriculum are as per the learner's and industry requirements.					
2.	The curriculum covers recent and emerging topics/subjects/areas.					
3.	With increasing use of technology and the internet usage, eSLM has the ability to replace the printed SLM.					
4.	Use of eSLM (eGyankosh, IGNOU eContent App) can augment the updating and delivery of the SLM.					
5.	Use of web-based academic support (like WEAS: Web-enabled Academic Support, a one-stop portal, online counselling, YouTube/ Facebook live) will strengthen the pedagogy.					
6.	There is ample scope for online submission and assessment of Assignments.					
7.	Extensive use of technology (online counselling, use of social media etc.) will have positive impact on the learning outcome.					
8.	Learners can be provided with the electronic gadgets like Tablet loaded with eSLM which can also be used for attending online counselling sessions.					
9.	In case gadget is provided to the learners, App should be developed which can help the learner to monitor his/her progress and suggest/recommend corrective measures.					

10.	Self Assessment Questions in the SLM should be thought provoking (like scramble words, analyze the graph, crossword etc.) instead of simple objective or subjective questions which only help in recalling the content.					
11.	Already existing OER can be adopted to replace the new programme/course development or updating the existing courses.					
12.	MOOCs can be adopted as replacement to the development of new course/revision of existing courses.					
13.	Course writing/editing/revision can be done online through cloud which can be accessed simultaneously by different experts.					
14.	All existing SLM should be converted to ePub format					
15.	Meetings for course design and development as well as revision can be done online instead of face to face mode.					
16.	Training for course writing, editing, vetting and translation can be done entirely online.					
17.	Online and on-demand term-endexamination should replace pen and paper based examination.					
18.	The weightage of internal assessment should be increased to more than 50% from the current 25-30%.					
19.	Questions for term-end examination should be completely MCQ based.					
20.	Questions for term-end examination should be a mix of MCQ and subjective type questions.					

Kindly give your suggestions on the following:

1. Alternative mode of evaluation for distance learners who do not have their own electronic device.

2. What are the tools you suggest for internal assessment of learners in case the Term end examination are MCQ based?

Thanks for providing your valuable feedback. Your responses will be kept confidential.