Pir Mehr Ali Shah

ARID AGRICULTURE UNIVERSITY
RAWALPINDI

DEPARTMENT OF AGRONOMY

Self Assessment Report

Ph. D. Agronomy

2008 – 2010

Program Team

Dr. Muhammad Ashraf	Coordinator
Dr. Muhammad Rasheed	Member
Mr. Safdar Ali	Member
Mr. Allah Wasaya	Member

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INTRODUCTION

The department is involved in production of food, fiber and fodder encompassing many of the same agronomic principles and their application for the management of crop production. Agronomy Department was established in 1984 and started its Ph.D. degree program in 1998. The Department of Agronomy offers research oriented Ph.D. degree program in Agronomy. Students who fulfill the criteria are admitted in Ph.D. Agronomy degrees program. Agronomy degree program is designed to be flexible in order to meet the student's requirements in different areas of Agronomy viz. Recent advances in agronomy, Plant water relations, Integrated agriculture .The Compulsory courses for Ph.D. students are Statistics and Bio-chemistry.

The Department has highly qualified and experienced faculty mostly having post doctorate research experience from universities of International fame. The faculty has produced 45 publications during the reporting period in journals of national and international repute. The related faculty members have specialization in the fields of Crop Modeling, Crop Production Technology, Advanced Seed Technology, Crop Nutrition, Allelopathy/ Weed Management etc. The department is running projects in collaboration with different national and international funding agencies.

CRITERION 1

PROGRAM MISSION, OBJECTIVES AND OUTCOMES

Components of Self Assessment Process:

The Department of Agronomy presents the doctorate students the awareness, technical skills for professional achievements in a changing world. The objective of the department is to increase crop production, quality and profit by employing their potential skills and experienced expertise of the faculties. Department is concerned in the production of food, fiber and fodder encompassing many of the same agronomic principles and their relevance for the management of crops production.

Mission Statements of the Department of Agronomy:

The Mission of the department is to equip and impart training to Ph.D students for high-quality education which should result in increased scientific knowledge and skills for

employment, productive citizenship, and life-long learning. Presently the department is concentrating in the areas of food, agriculture and natural resources.

STANDARDS

Standards 1.1: Documented measurable objectives

Objectives:

The main objectives of the department are to:

1. Build up the Department on modern lines for education and research at Ph.D level.
2. Impart practical knowledge and scientific skills in the concerned subject by employing advanced analytical approaches.
3. Broaden the vision of students by teaching them integrated agriculture.
4. Adherence to new teaching methods &planning for current and future researchable issues.

Outcomes:

1. Department of Agronomy was strengthened by planning the time needed education and research for Ph. D students.
2. Ph.D scholars were imparted practical knowledge using advanced analytical techniques.
3. Integration was achieved through interviews, discussion on latest developments in the field and translation in applied research projects/thesis research.
4. Updating of curricula was done to achieve the objective of anticipation of new teaching/researchable areas.

Main elements of strategic plan to achieve mission and objectives:

- Growth of sound training system based on consultation from world reviews, writing, inventive, measures, symposia, workshops, etc for the award of degrees to these students
- Frequent planning for updating the curricula of core&, elective subjects and specialized areas.
- Improving the research labs. equipping with up to date facilities& equipments
- Publication of research data in scientific journals of world repute, books and other literature.

Program Objectives Assessment

Table 1: Objective Assessment

Sr. #	Objectives	How measured	When measured	Improvement identified	Improvement made
1	Development & Strengthening of Agronomy Department for Doctoral education	On the basis of availability of latest research facilities and practical application of new technology in agronomic areas of agriculture	It is a continuous process as per requirement	Teaching and research methodology is needed to be improved	Teaching and research methods have been revised in order to make them more attractive and understandable
2.	To impart practical / applied knowledge to the Doctorate scholars.	Through the semestoral, Written and oral comprehensive examinations.	During their Doctorate research and comprehensive examinations	Some new courses and research facilities are needed to be included in the curriculum	Curricula have been revised as per requirement of HEC.
3	Integration of related field	By examining the students in integration of the things or different aspects in agri. Production.	During semester and comprehensive exams. And research activities	Integrated agriculture subject needed to include in the Ph. D. course work	Integrated agriculture course has been approved for Ph.D. classes

4	Anticipation of new teaching/researchable areas	With the need of current advancement in the relevant areas	Continuous activity	Time need based new courses research problems are needed to be included in curriculum, problem - research	Approval of new curricula and research areas has been accorded

Standard 1.2: Objectives Vs Outcomes

Table 2: Objectives Vs Outcomes

		Objectives			
	Sr.#	1	2	3	4
Outcomes	1	***	**	*	**
	2	**	**	**	**
	3	***	**	*	**
	4	**	**	**	**

* Relevant

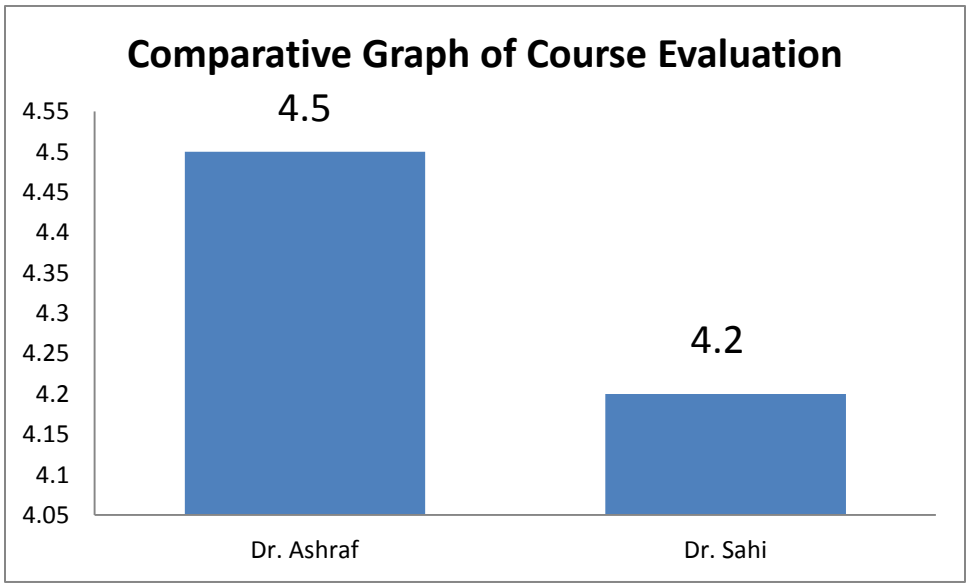
** Relevant and satisfactory

*** Highly relevant and satisfactory

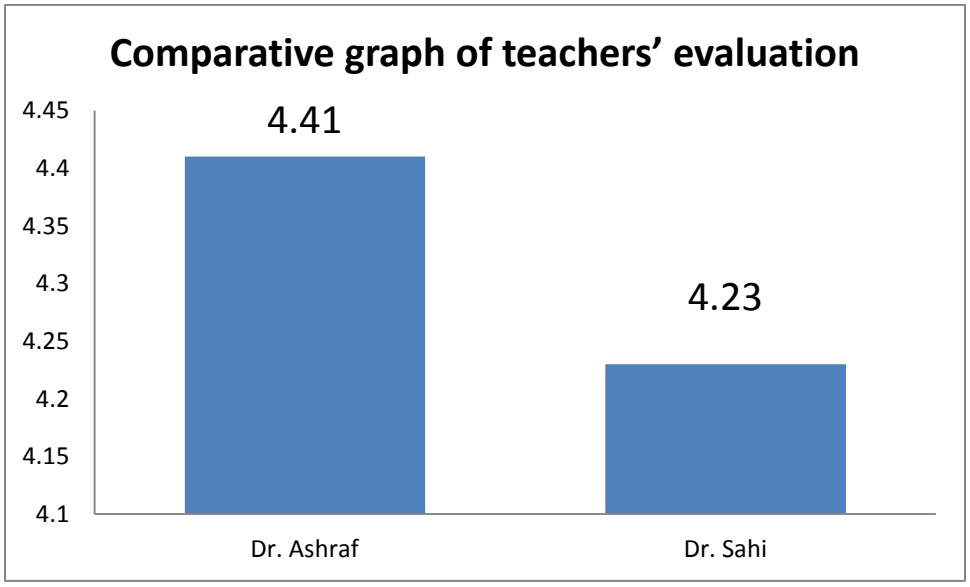
Performa 1 & 10: Teacher & Course Evaluation

Comparative graph of courses evaluation:

The values for comparative graphs of courses and teachers evaluation were derived from the proformas filled in by the students, and then the impact was calculated according to the formula given by QEC.



Comparative graph of teachers' evaluation:



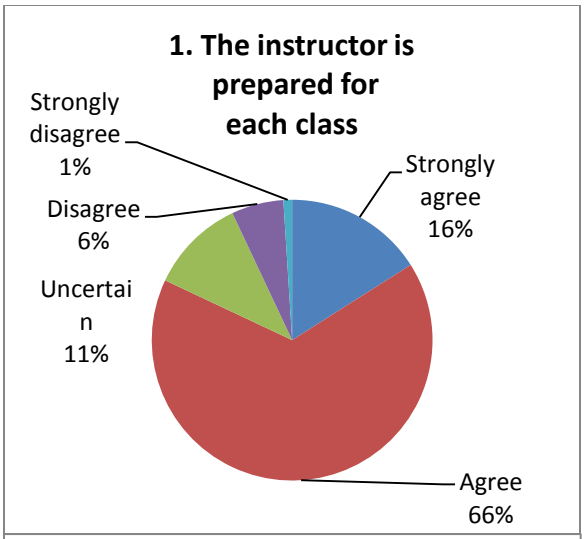
1. Dr. Muhammad Ashraf

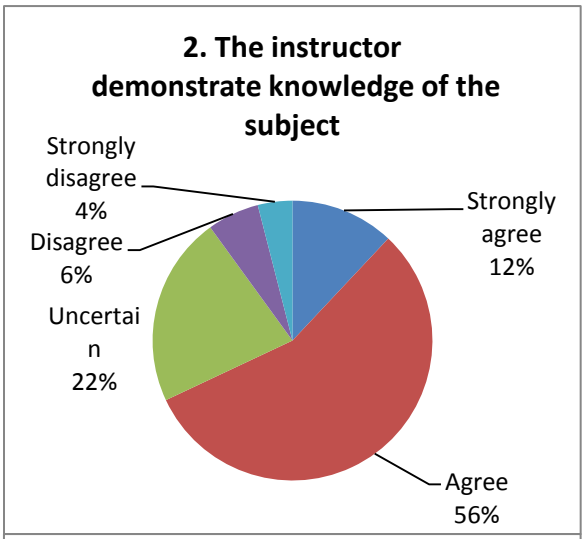
i. Teacher Evaluation

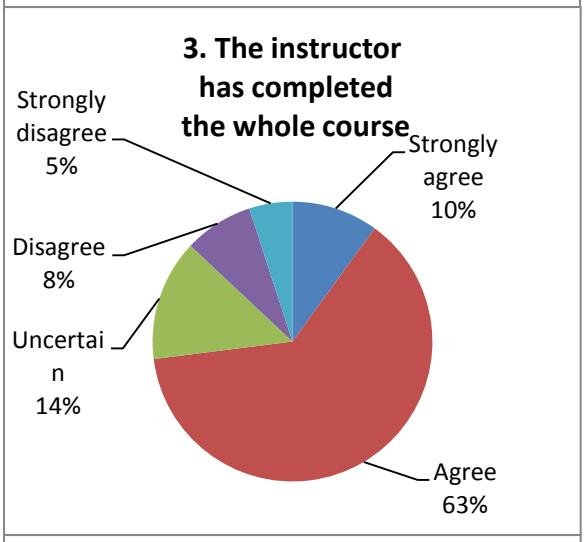
Data were collected from 5 Ph.D. students. Among the teachers, Prof. Dr. Muhammad Ashraf won the impact of excellent grade (4.41) that was followed by Prof. Dr. F.H. Sahi with very good impact (4.23). The individual parameters showed that the 17% of the students strongly agreed, 64% agreed, 8% uncertain, 10% disagreed, and 1% strongly disagreed that the teacher is fair in examination . Sixty six percent students agreed that the instructor came with good preparation. Similarly, most of the students agreed that instructor demonstrates knowledge of the subject, instructor had completed the whole course, the Instructor provided additional material apart from the textbook, the Instructor gave citations regarding current situations with reference to Pakistani context, the Instructor communicates the subject matter, the Instructor shows respect towards students and encourages class participation effectively, the instructor maintained an environment that was conducive to learning, the Instructor arrived on time, the Instructor returned the graded scripts etc. in a reasonable amount of time, the Instructor was available during the specified office hours after class for consultations, the Subject matter presented in the course has increased their knowledge of the subject, the syllabus clearly states course objectives requirements, procedures and grading criteria, the course integrates theoretical course concepts with real-world applications, and the assignments and exams covered the materials presented in the course, the course material is modern and updated.

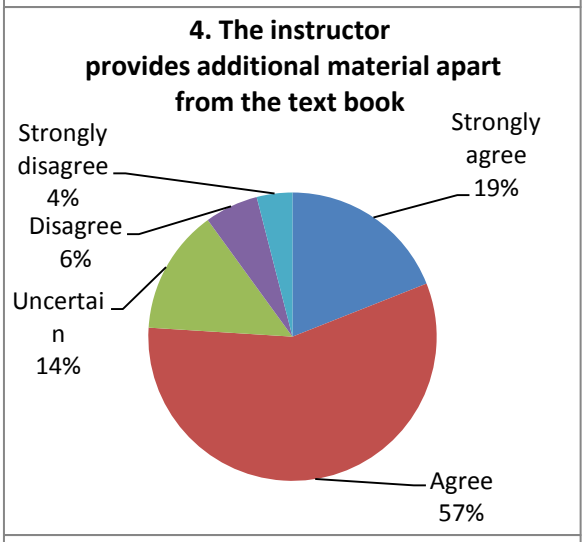
Comments / Suggestions

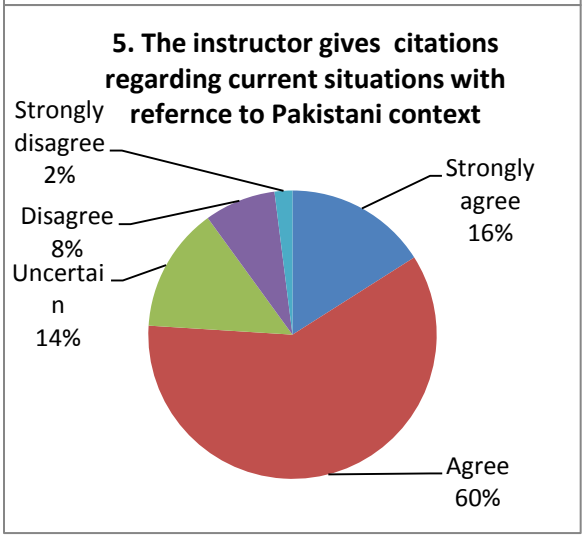
1. Environment is friendly and cooperative.
2. Good way of teaching, a man of foresight.
3. Scientific approach of teaching.

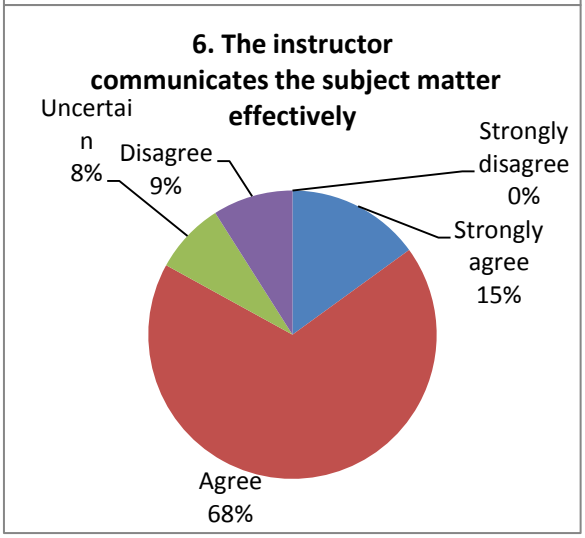

1. The instructor is prepared for each class
Strongly disagree 1%
Disagree 6%
Uncertain 11%
Strongly agree 16%
Agree 66%

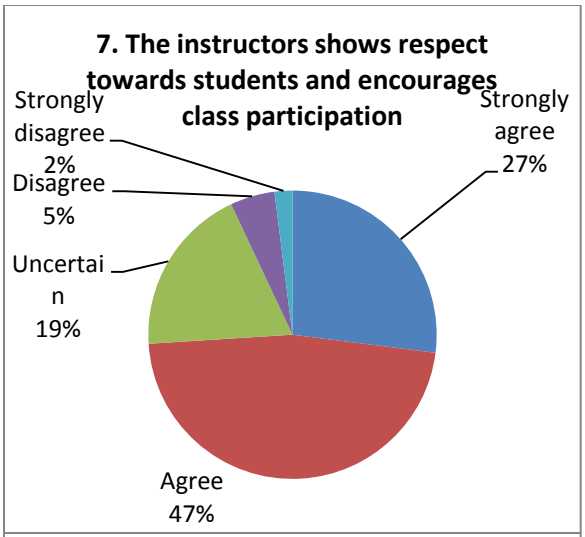

2. The instructor demonstrate knowledge of the subject
Strongly disagree 4%
Disagree 6%
Uncertain 22%
Strongly agree 12%
Agree 56%

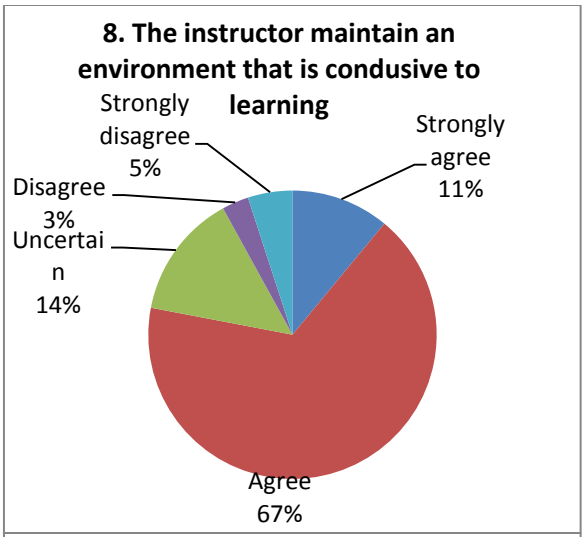

3. The instructor has completed the whole course
Strongly disagree 5%
Disagree 8%
Uncertain 14%
Strongly agree 10%
Agree 63%

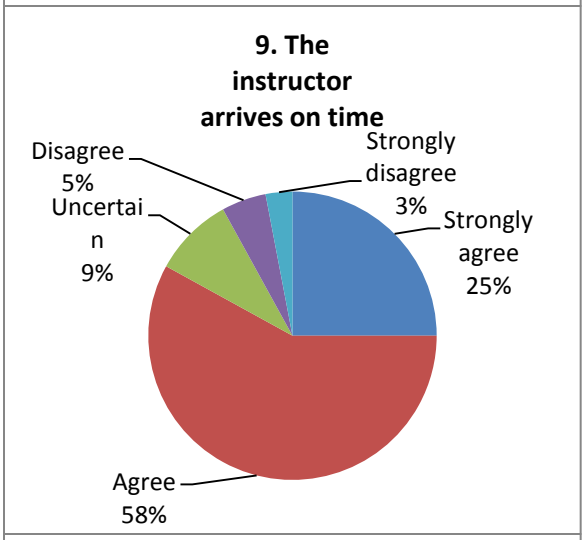

4. The instructor provides additional material apart from the text book
Strongly disagree 4%
Disagree 6%
Uncertain 14%
Strongly agree 19%
Agree 57%

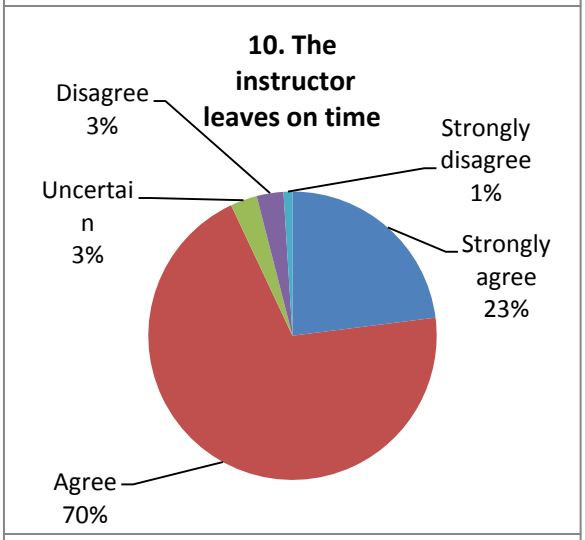

5. The instructor gives citations regarding current situations with refernce to Pakistani context
Strongly disagree 2%
Disagree 8%
Uncertain 14%
Strongly agree 16%
Agree 60%

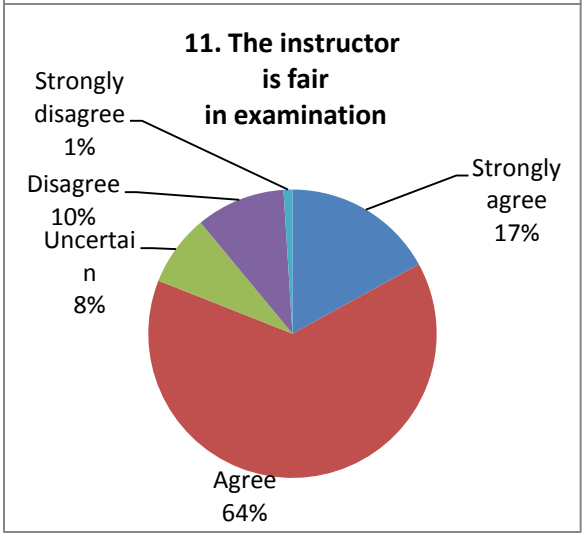

6. The instructor communicates the subject matter effectively
Uncertain 8%
Disagree 9%
Strongly disagree 0%
Strongly agree 15%
Agree 68%

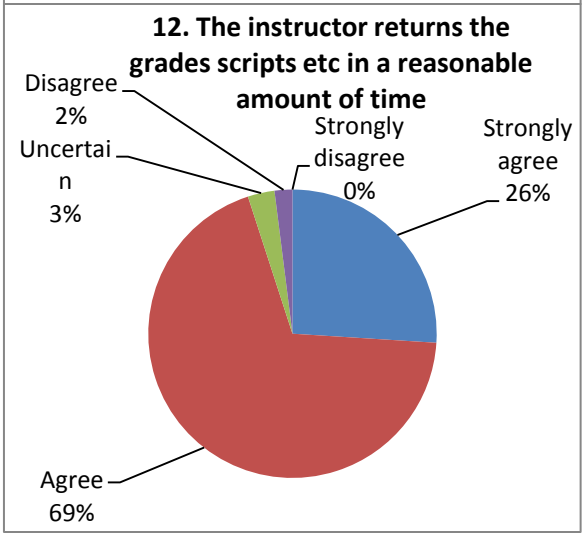

7. The instructors shows respect towards students and encourages class participation
Strongly disagree 2%
Disagree 5%
Uncertain 19%
Agree 47%
Strongly agree 27%

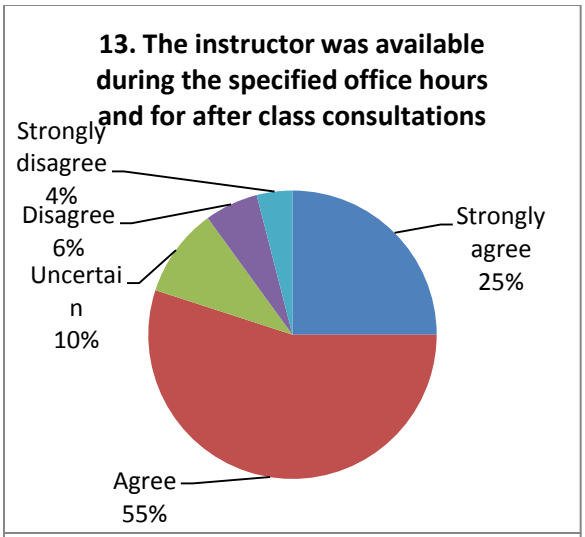

8. The instructor maintain an environment that is condusive to learning
Strongly disagree 5%
Disagree 3%
Uncertain 14%
Agree 67%
Strongly agree 11%

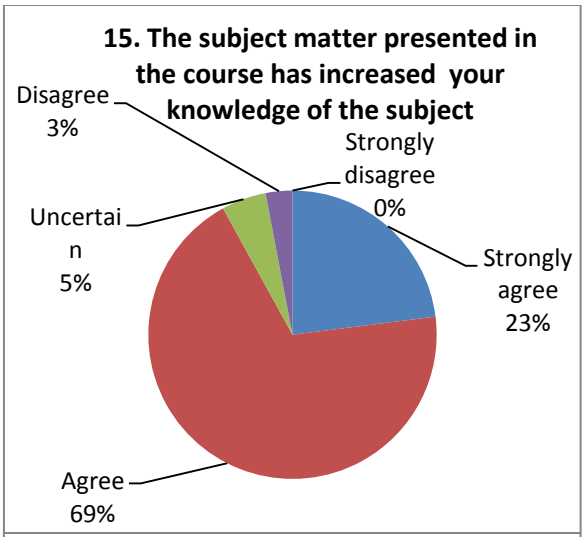

9. The instructor arrives on time
Disagree 5%
Uncertain 9%
Strongly disagree 3%
Strongly agree 25%
Agree 58%

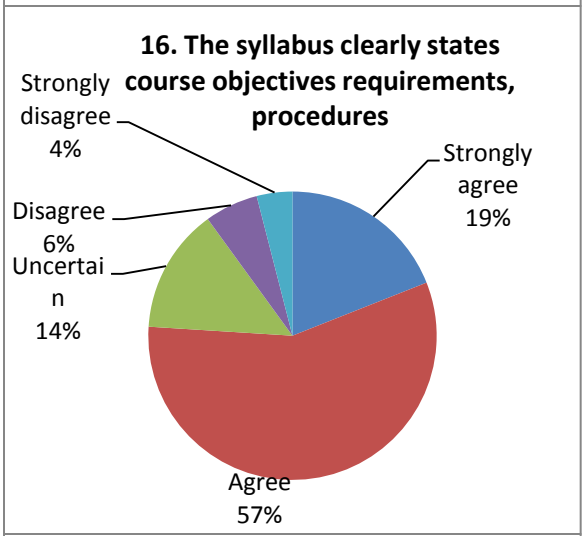

10. The instructor leaves on time
Disagree 3%
Uncertain 3%
Strongly disagree 1%
Strongly agree 23%
Agree 70%

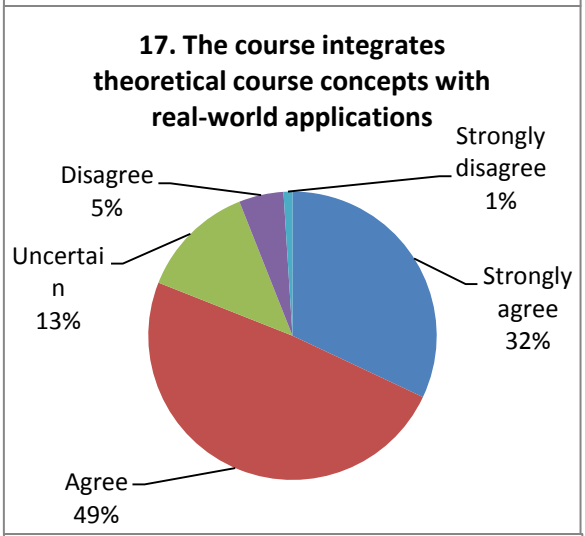

11. The instructor is fair in examination
Strongly disagree 1%
Disagree 10%
Uncertain 8%
Agree 64%
Strongly agree 17%

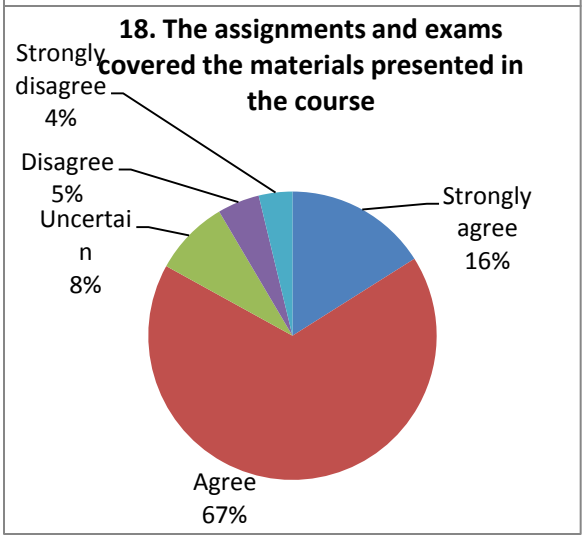

12. The instructor returns the grades scripts etc in a reasonable amount of time
Disagree 2%
Uncertain 3%
Strongly disagree 0%
Agree 69%
Strongly agree 26%

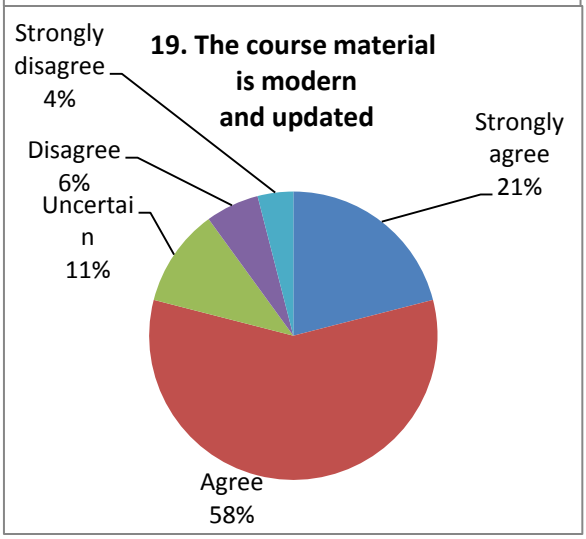

13. The instructor was available during the specified office hours and for after class consultations
Strongly disagree 4%
Disagree 6%
Uncertain 10%
Strongly agree 25%
Agree 55%


15. The subject matter presented in the course has increased your knowledge of the subject
Disagree 3%
Strongly disagree 0%
Uncertain 5%
Strongly agree 23%
Agree 69%


16. The syllabus clearly states course objectives requirements, procedures
Strongly disagree 4%
Disagree 6%
Uncertain 14%
Strongly agree 19%
Agree 57%


17. The course integrates theoretical course concepts with real-world applications
Disagree 5%
Strongly disagree 1%
Uncertain 13%
Strongly agree 32%
Agree 49%


18. The assignments and exams covered the materials presented in the course
Strongly disagree 4%
Disagree 5%
Uncertain 8%
Strongly agree 16%
Agree 67%


19. The course material is modern and updated
Strongly disagree 4%
Disagree 6%
Uncertain 11%
Strongly agree 21%
Agree 58%

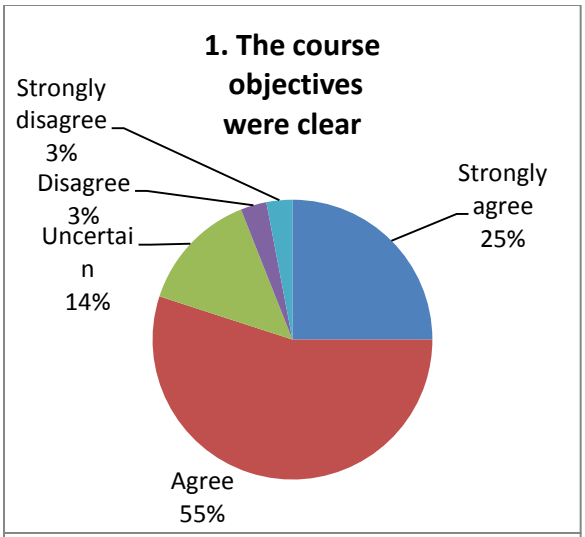
ii. Course Evaluation:

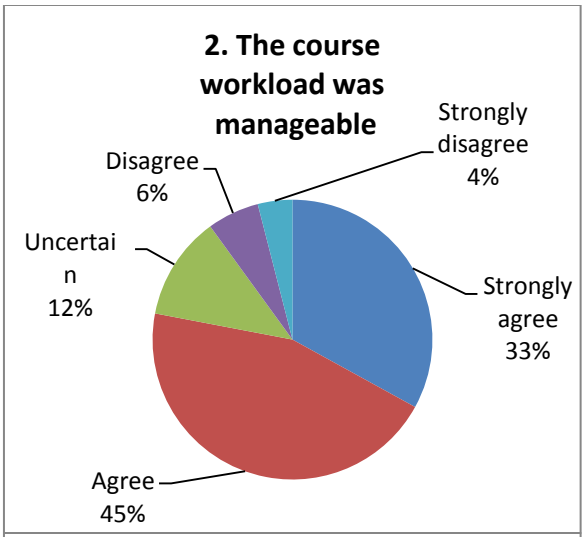
AGR-710	**Crop Nutrition**	**3(2-2)**	**Prof.Dr. Muhammad Ashraf**

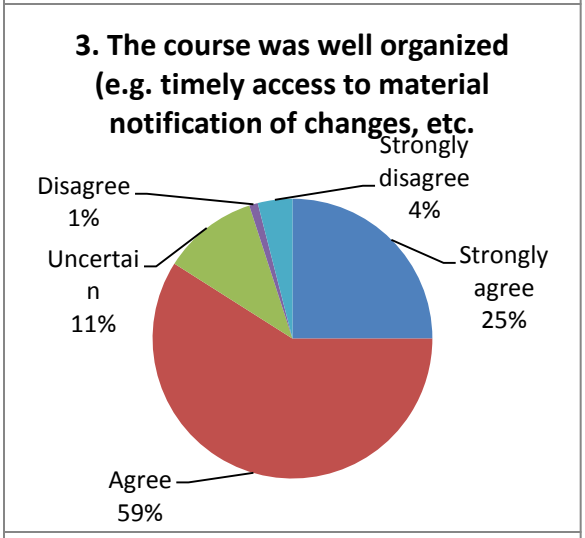
Data were collected from 5 Ph.D. students. Comparative graph of course evaluation showed that the course taught by Prof.Dr. Muhammad Ashraf (AGR-710) gained a higher value of impact (4.5) that was followed by AGR-717 taught by Prof. Dr. F. H. Sahi with an impact value of 4.2. The individual parameter showed that 25% the students strongly agreed, 55% agreed, 14 % uncertain, 3% disagreed and 3% strongly disagreed that the course objectives were clear. For the remaining parameters most of the students agreed that the course was well structured to achieve the learning outcomes (there was a good balance of lectures, tutorials, practical etc.). Similarly, they agreed that the learning and teaching methods encouraged participation, the overall environment in the class was conductive to learning, and classrooms were satisfactory, learning materials (Lesson Plans, Course Notes etc.) were relevant and useful, recommended reading books etc. were relevant and appropriate. They described that the provision of learning resources in the library was adequate and the course stimulated their interest and thought on the subject area. According to most of the students, the pace of the Course was appropriate, ideas and concepts were presented clearly, the method of assessment were reasonable, the material was well organized and presented, the instructor was responsive to student needs and problems, instructor was regular throughout the course and the material in the tutorials was useful.

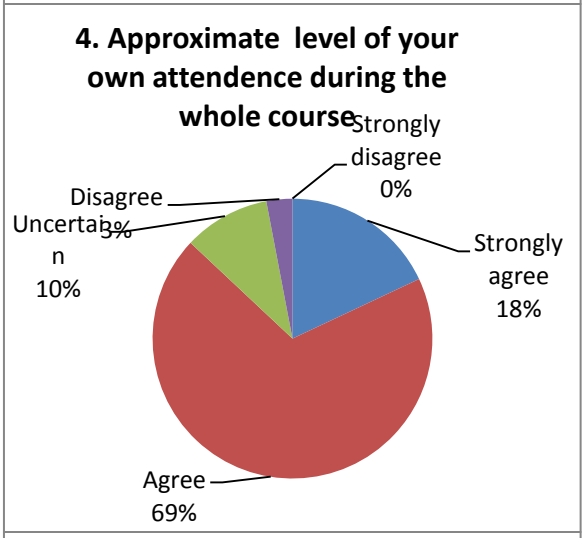
Comments / Suggestions

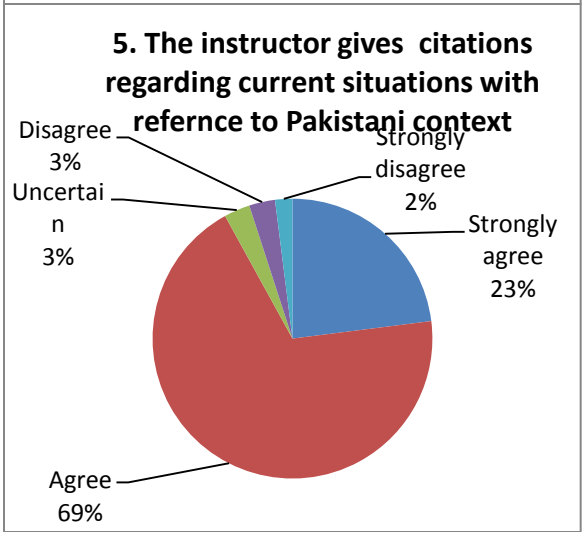
1. More practicals must be arranged in labs.
2. Course should be up graded and updated.
3. Learning environment and resources were not satisfactory.
4. Usage of visuals, practical demonstrations and multimedia can make the course interesting and effective.
5. Course objectives must be clearly defined.

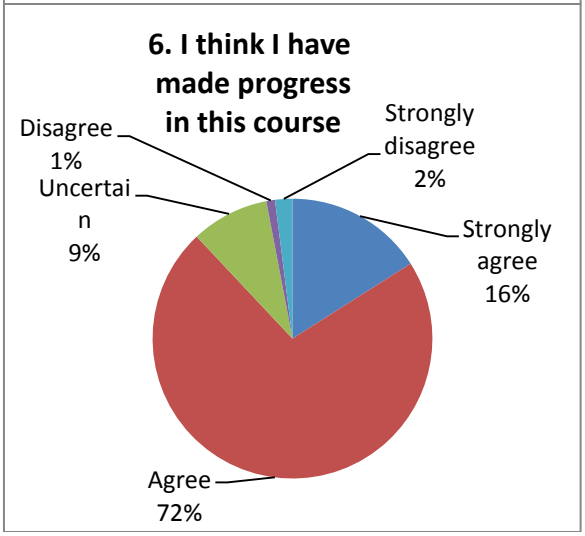

1. The course objectives were clear
Strongly disagree 3%
Disagree 3%
Uncertain 14%
Strongly agree 25%
Agree 55%

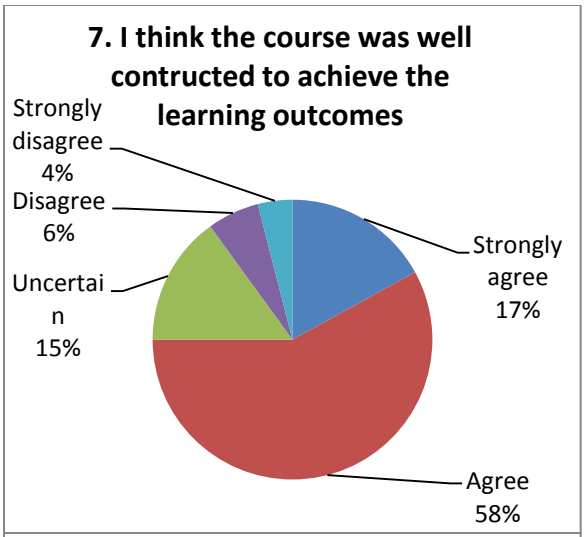

2. The course workload was manageable
Disagree 6%
Strongly disagree 4%
Uncertain 12%
Strongly agree 33%
Agree 45%

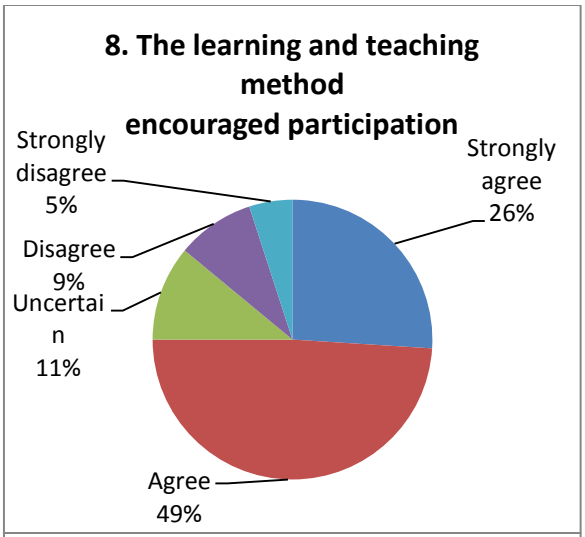

3. The course was well organized (e.g. timely access to material notification of changes, etc.
Disagree 1%
Strongly disagree 4%
Uncertain 11%
Strongly agree 25%
Agree 59%

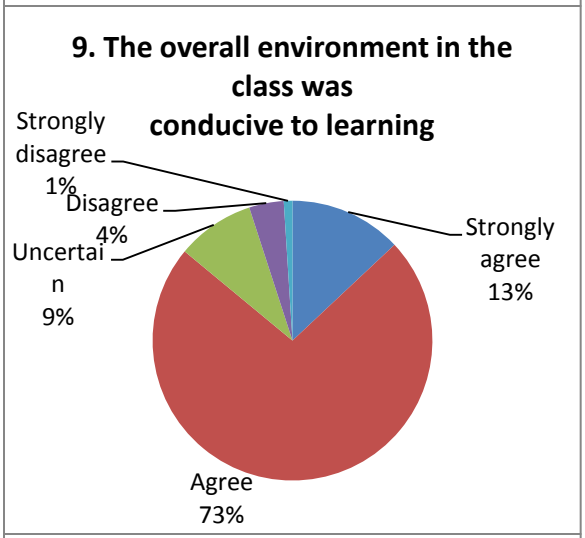

4. Approximate level of your own attendence during the whole course
Strongly disagree 0%
Disagree 3%
Uncertain 10%
Strongly agree 18%
Agree 69%

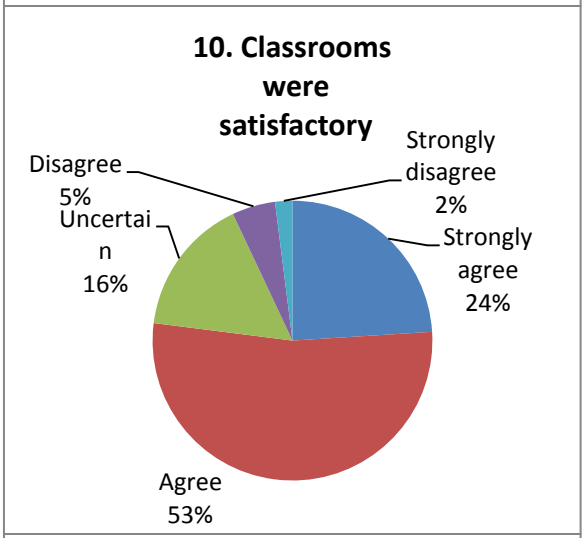

5. The instructor gives citations regarding current situations with refernce to Pakistani context
Disagree 3%
Strongly disagree 2%
Uncertain 3%
Strongly agree 23%
Agree 69%

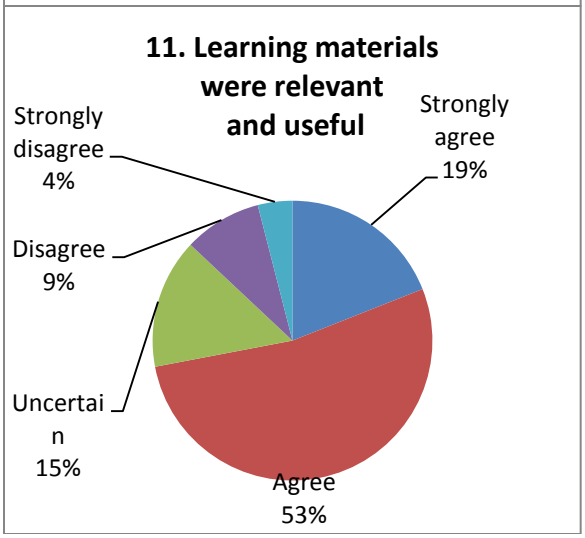

6. I think I have made progress in this course
Disagree 1%
Strongly disagree 2%
Uncertain 9%
Strongly agree 16%
Agree 72%

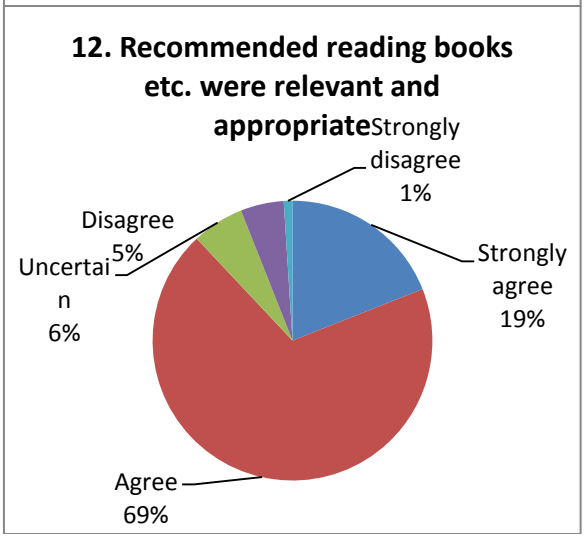

7. I think the course was well contructed to achieve the learning outcomes
Strongly disagree 4%
Disagree 6%
Uncertain 15%
Strongly agree 17%
Agree 58%

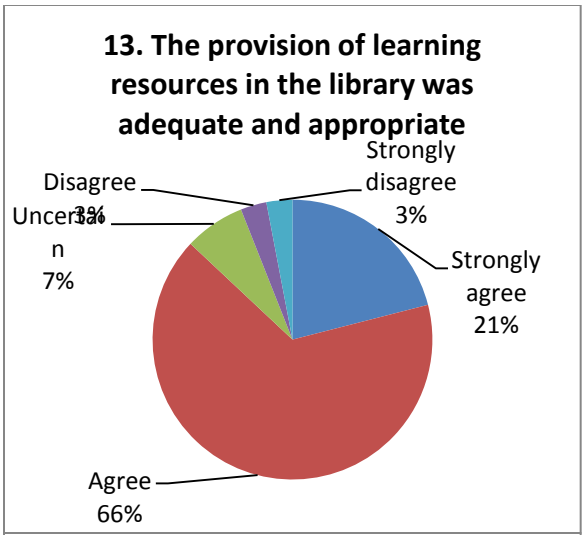

8. The learning and teaching method encouraged participation
Strongly disagree 5%
Disagree 9%
Uncertain 11%
Strongly agree 26%
Agree 49%

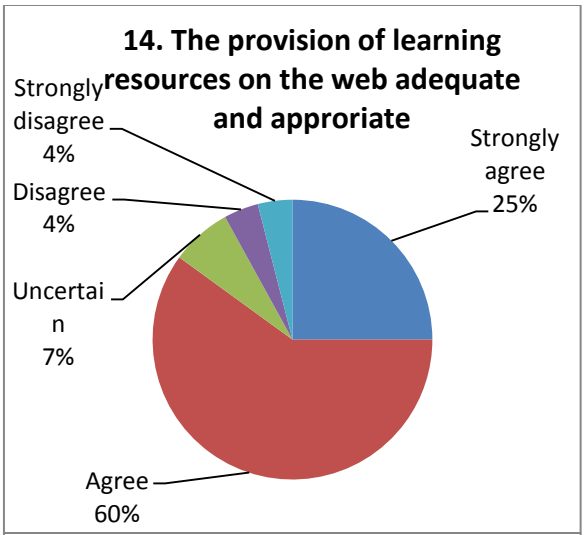

9. The overall environment in the class was conducive to learning
Strongly disagree 1%
Disagree 4%
Uncertain 9%
Strongly agree 13%
Agree 73%

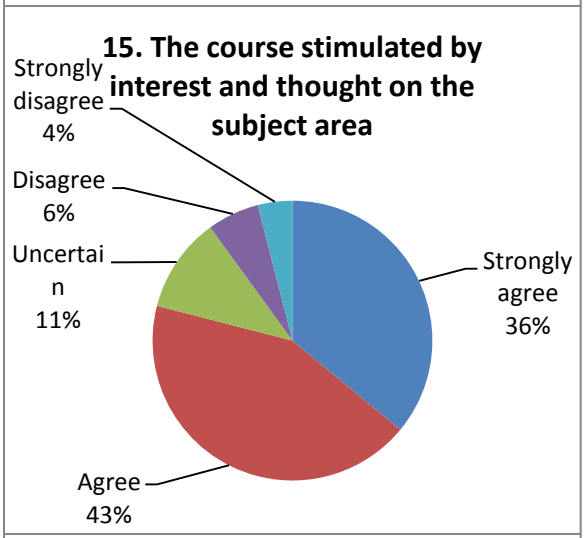

10. Classrooms were satisfactory
Disagree 5%
Uncertain 16%
Strongly disagree 2%
Strongly agree 24%
Agree 53%

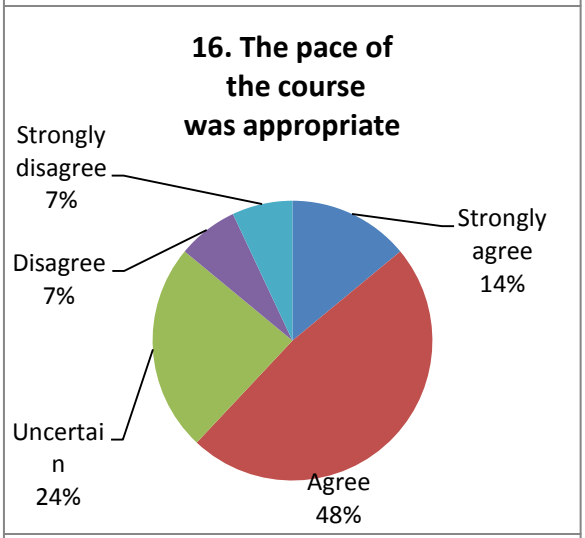

11. Learning materials were relevant and useful
Strongly disagree 4%
Disagree 9%
Uncertain 15%
Strongly agree 19%
Agree 53%

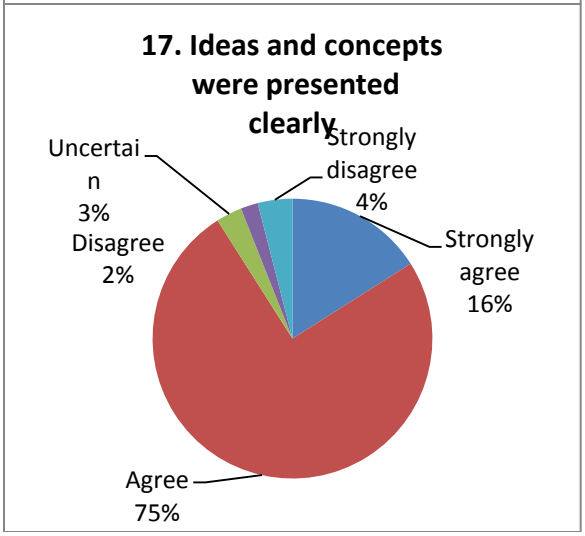

12. Recommended reading books etc. were relevant and appropriate
Strongly disagree 1%
Disagree 5%
Uncertain 6%
Strongly agree 19%
Agree 69%

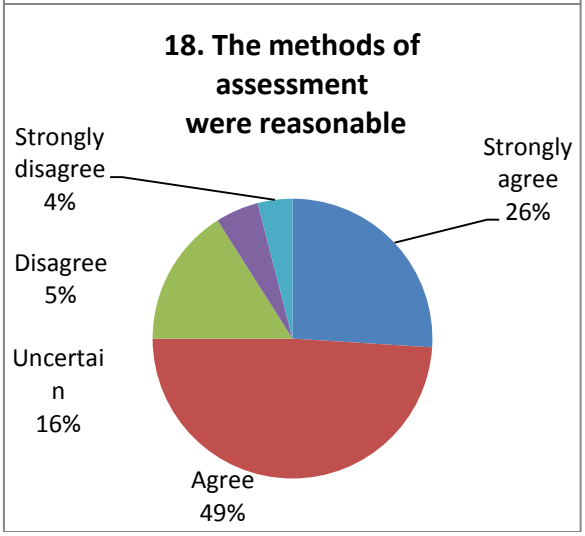

13. The provision of learning resources in the library was adequate and appropriate
Strongly disagree 3%
Disagree 3%
Uncertain 7%
Strongly agree 21%
Agree 66%

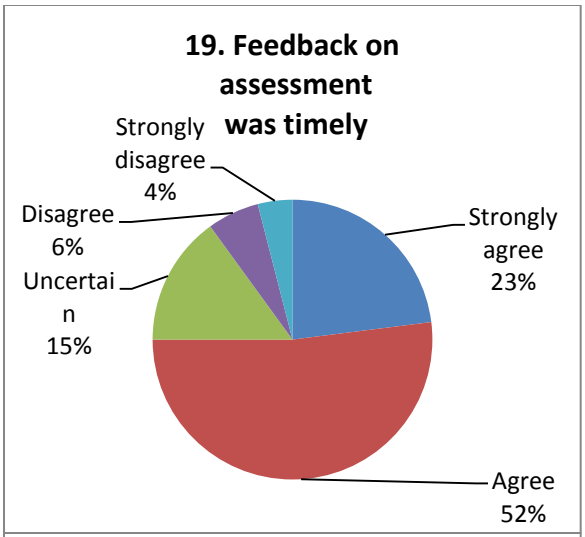

14. The provision of learning resources on the web adequate and approriate
Strongly disagree 4%
Disagree 4%
Uncertain 7%
Strongly agree 25%
Agree 60%

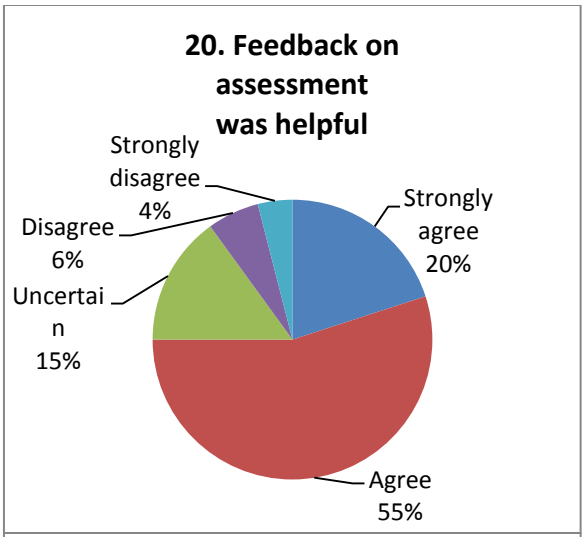

15. The course stimulated by interest and thought on the subject area
Strongly disagree 4%
Disagree 6%
Uncertain 11%
Strongly agree 36%
Agree 43%

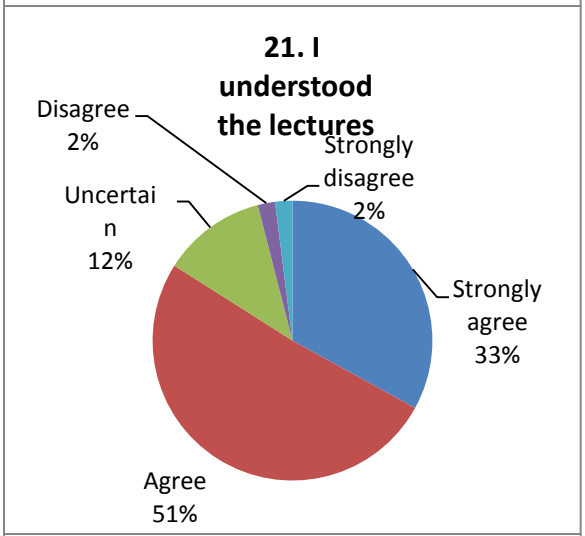

16. The pace of the course was appropriate
Strongly disagree 7%
Disagree 7%
Uncertain 24%
Strongly agree 14%
Agree 48%

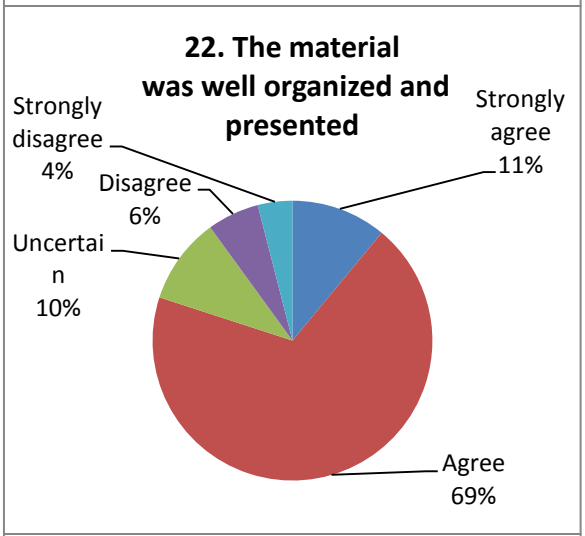

17. Ideas and concepts were presented clearly
Uncertain 3%
Strongly disagree 4%
Disagree 2%
Strongly agree 16%
Agree 75%

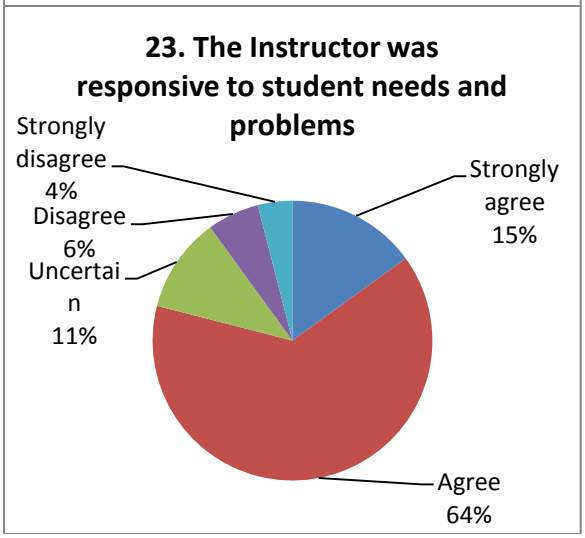

18. The methods of assessment were reasonable
Strongly disagree 4%
Disagree 5%
Uncertain 16%
Strongly agree 26%
Agree 49%

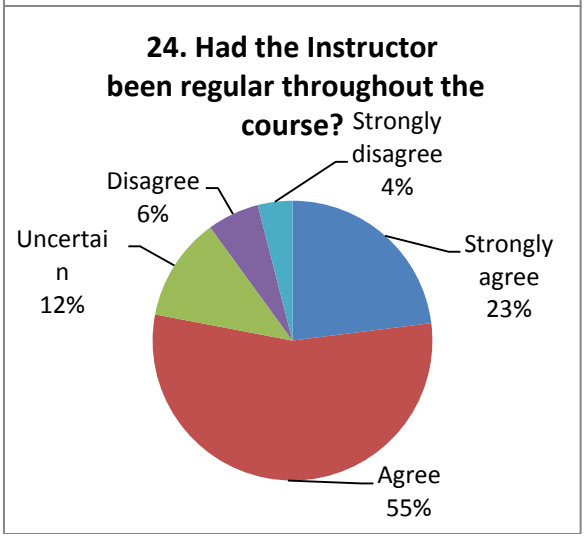

19. Feedback on assessment was timely
Strongly disagree 4%
Disagree 6%
Uncertain 15%
Strongly agree 23%
Agree 52%

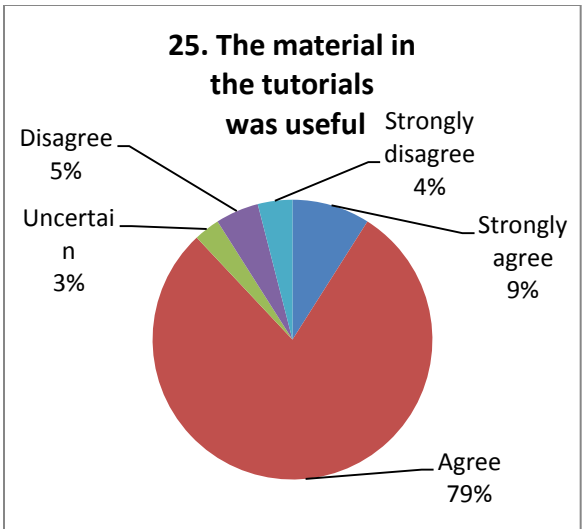

20. Feedback on assessment was helpful
Strongly disagree 4%
Disagree 6%
Uncertain 15%
Strongly agree 20%
Agree 55%

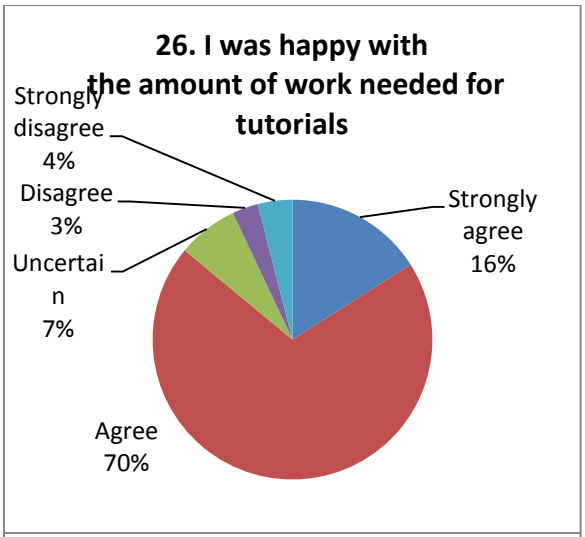

21. I understood the lectures
Disagree 2%
Strongly disagree 2%
Uncertain 12%
Strongly agree 33%
Agree 51%

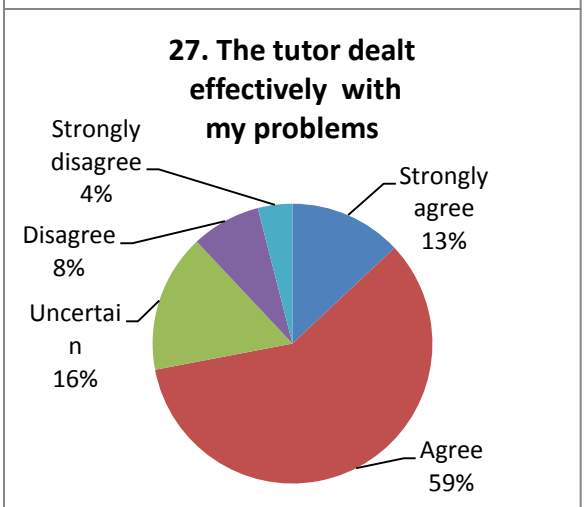

22. The material was well organized and presented
Strongly disagree 4%
Disagree 6%
Uncertain 10%
Strongly agree 11%
Agree 69%

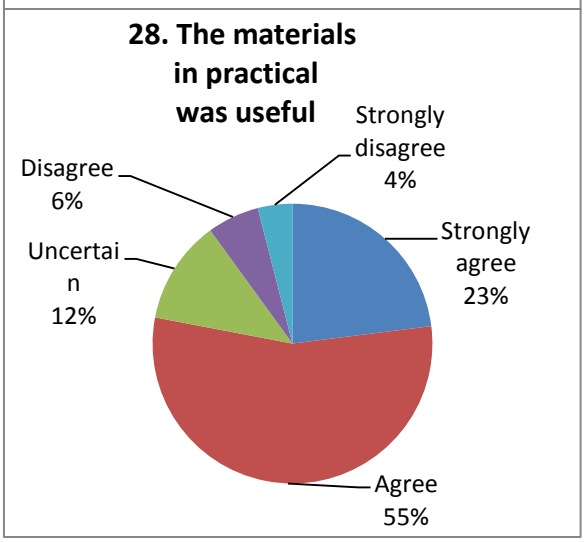

23. The Instructor was responsive to student needs and problems
Strongly disagree 4%
Disagree 6%
Uncertain 11%
Strongly agree 15%
Agree 64%

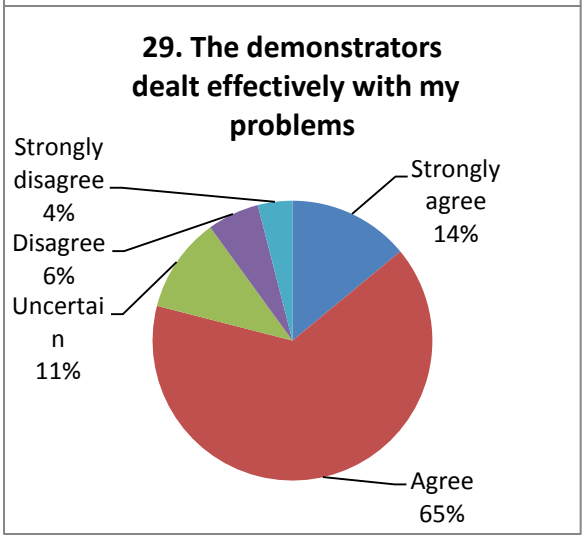

24. Had the Instructor been regular throughout the course?
Strongly disagree 4%
Disagree 6%
Uncertain 12%
Strongly agree 23%
Agree 55%


25. The material in the tutorials was useful
Disagree 5%
Strongly disagree 4%
Uncertain 3%
Strongly agree 9%
Agree 79%


26. I was happy with the amount of work needed for tutorials
Strongly disagree 4%
Disagree 3%
Uncertain 7%
Strongly agree 16%
Agree 70%


27. The tutor dealt effectively with my problems
Strongly disagree 4%
Disagree 8%
Uncertain 16%
Strongly agree 13%
Agree 59%


28. The materials in practical was useful
Disagree 6%
Strongly disagree 4%
Uncertain 12%
Strongly agree 23%
Agree 55%


29. The demonstrators dealt effectively with my problems
Strongly disagree 4%
Disagree 6%
Uncertain 11%
Strongly agree 14%
Agree 65%

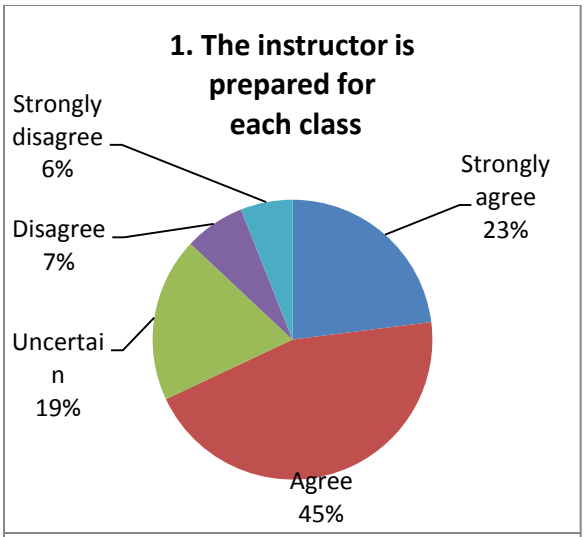
2. Dr. Muhammad Ashraf

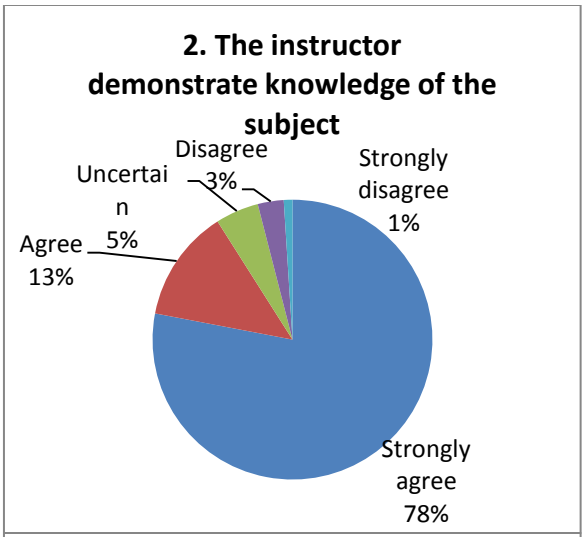
i. Teacher Evaluation

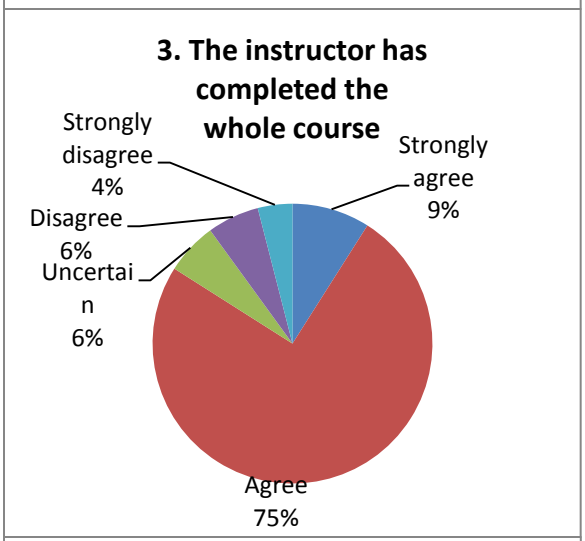
Data were collected from 5 Ph.D. students. The individual parameters showed that the 14% of the students strongly agreed, 49% agreed, 21% uncertain, 9% disagreed, and 7% strongly disagreed that the teacher is fair in examination. Most of the students agreed that the instructor came with good preparation. Similarly, most of the students agreed that instructor demonstrates knowledge of the subject, instructor had completed the whole course, the Instructor provided additional material apart from the textbook, the instructor gave citations regarding current situations with reference to Pakistani context, the Instructor communicates the subject matter, the instructor shows respect towards students and encourages class participation effectively, the instructor maintained an environment that was conducive to learning, the instructor arrived on time, the instructor returned the graded scripts etc. in a reasonable amount of time, the instructor was available during the specified office hours after class for consultations, the Subject matter presented in the course has increased their knowledge of the subject, the syllabus clearly states course objectives requirements, procedures and grading criteria, the course integrates theoretical course concepts with real-world applications, and the assignments and exams covered the materials presented in the course, the course material is modern and updated.

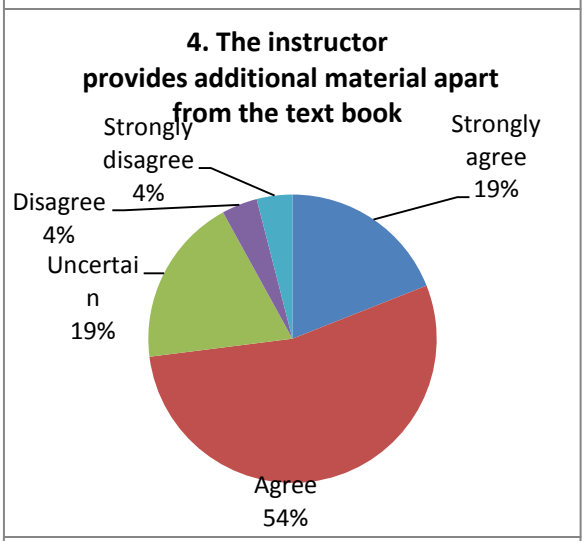
Comments/Suggestions

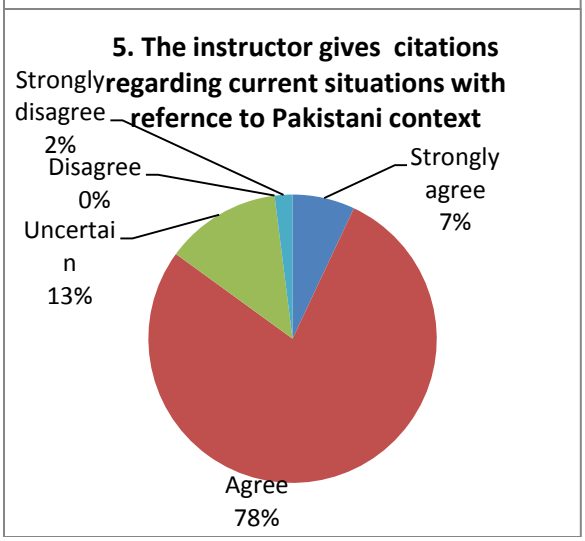
1. Gentle person, nice teacher.
2. Teacher provided practical experience related with field with special emphasis on agro-environmental conditions of Pakistan.
3. The instructor was well organized and prepared.
4. Presented the idea clearly.
5. Disseminated knowledge effectively.
6. Instructor is very punctual and diligent

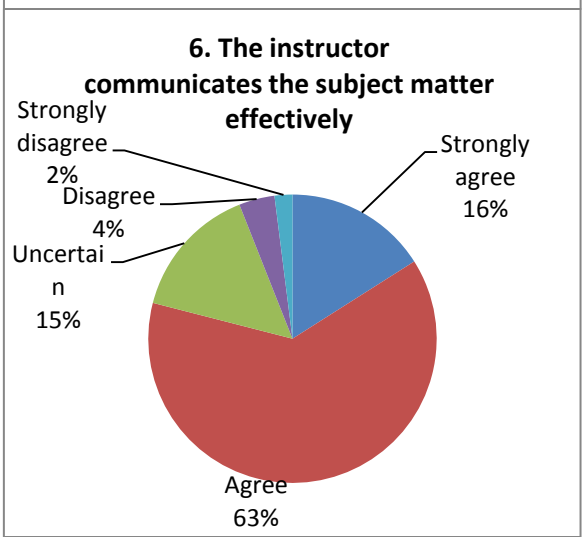

1. The instructor is prepared for each class
Strongly disagree 6%
Disagree 7%
Uncertain 19%
Agree 45%
Strongly agree 23%

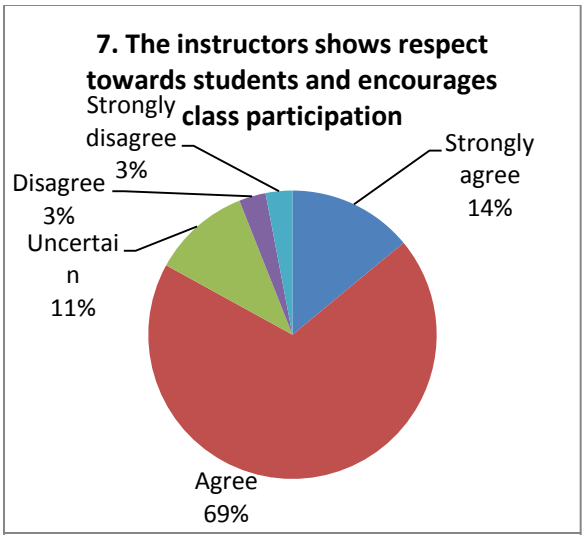

2. The instructor demonstrate knowledge of the subject
Disagree 3%
Uncertain 5%
Agree 13%
Strongly disagree 1%
Strongly agree 78%

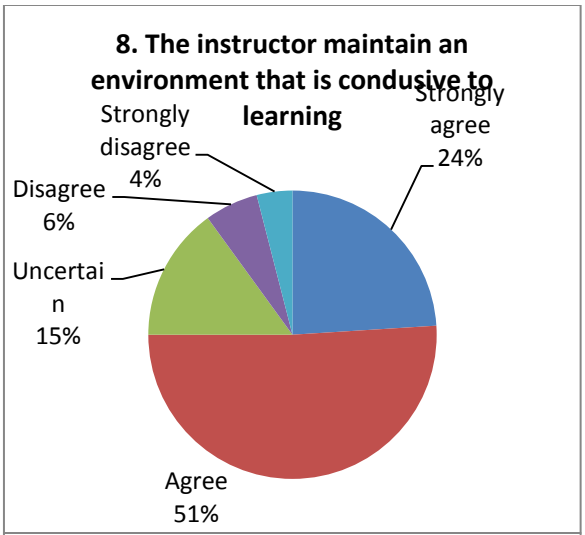

3. The instructor has completed the whole course
Strongly disagree 4%
Disagree 6%
Uncertain 6%
Agree 75%
Strongly agree 9%

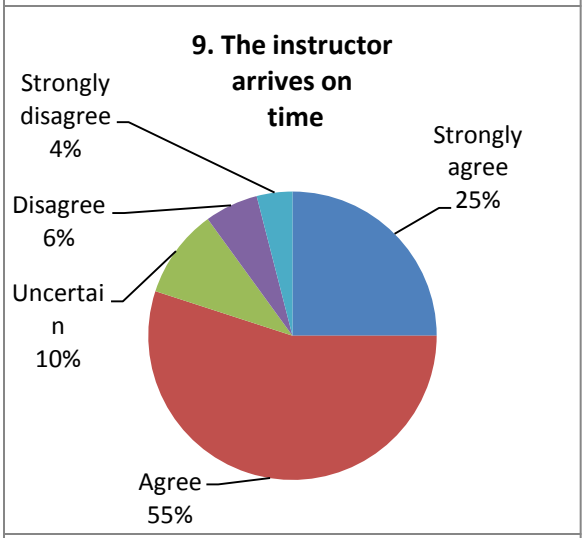

4. The instructor provides additional material apart from the text book
Strongly disagree 4%
Disagree 4%
Uncertain 19%
Agree 54%
Strongly agree 19%

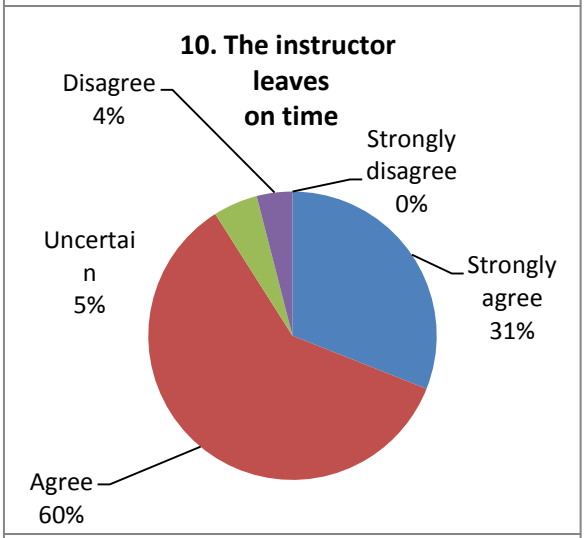

5. The instructor gives citations regarding current situations with refernce to Pakistani context
Strongly disagree 2%
Disagree 0%
Uncertain 13%
Agree 78%
Strongly agree 7%

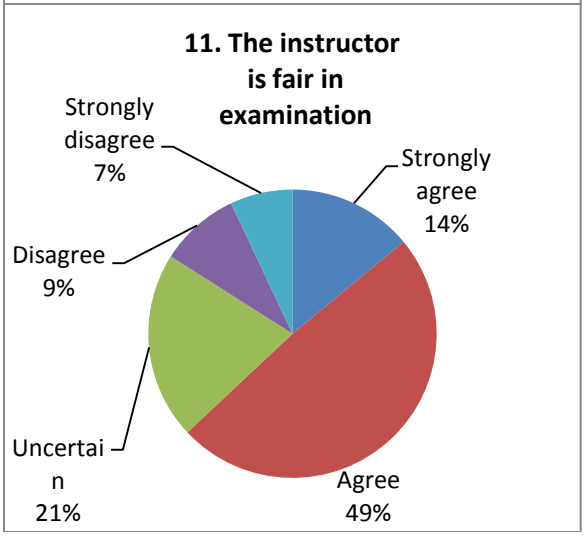

6. The instructor communicates the subject matter effectively
Strongly disagree 2%
Disagree 4%
Uncertain 15%
Agree 63%
Strongly agree 16%

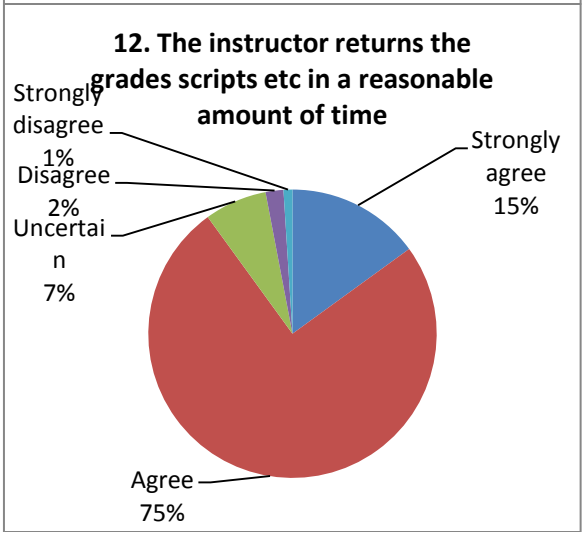

7. The instructors shows respect towards students and encourages class participation
Strongly disagree 3%
Strongly agree 14%
Disagree 3%
Uncertain 11%
Agree 69%


8. The instructor maintain an environment that is condusive to learning
Strongly disagree 4%
Strongly agree 24%
Disagree 6%
Uncertain 15%
Agree 51%

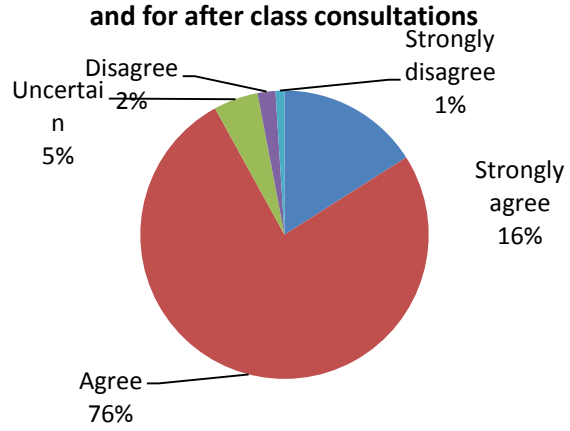

9. The instructor arrives on time
Strongly disagree 4%
Strongly agree 25%
Disagree 6%
Uncertain 10%
Agree 55%


10. The instructor leaves on time
Disagree 4%
Strongly disagree 0%
Uncertain 5%
Strongly agree 31%
Agree 60%

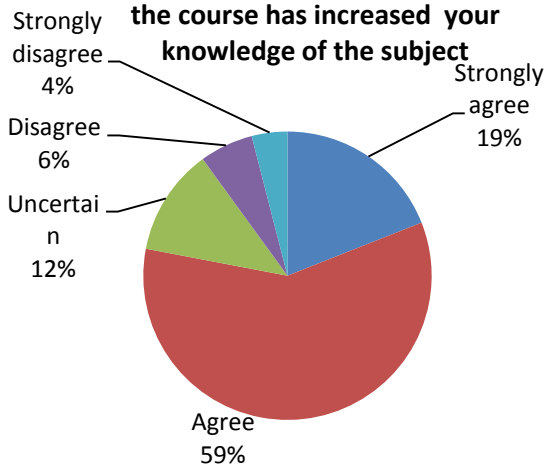

11. The instructor is fair in examination
Strongly disagree 7%
Strongly agree 14%
Disagree 9%
Uncertain 21%
Agree 49%


12. The instructor returns the grades scripts etc in a reasonable amount of time
Strongly disagree 1%
Strongly agree 15%
Disagree 2%
Uncertain 7%
Agree 75%

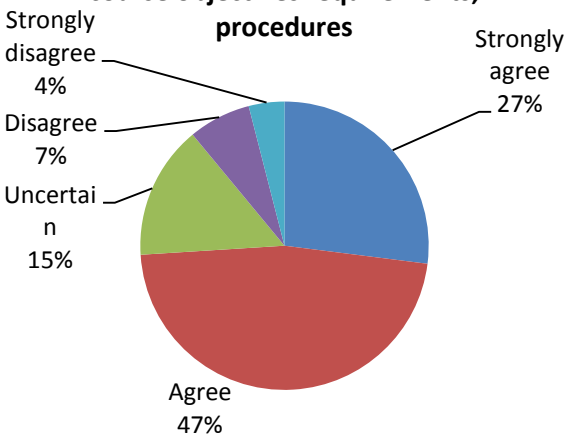
13. The instructor was available during the specified office hours and for after class consultations



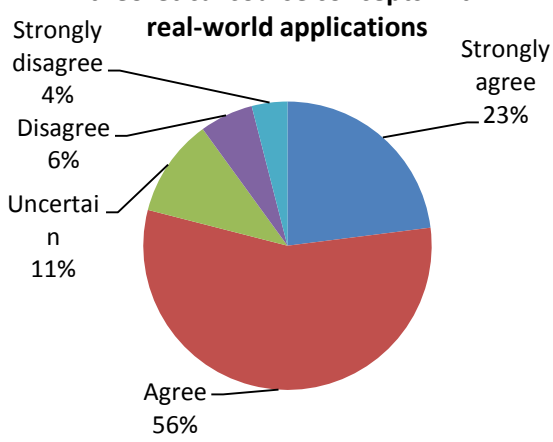
15. The subject matter presented in the course has increased your knowledge of the subject



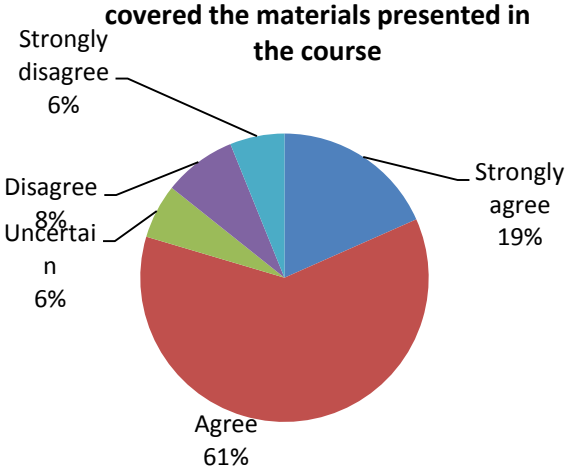
16. The syllabus clearly states course objectives requirements, procedures



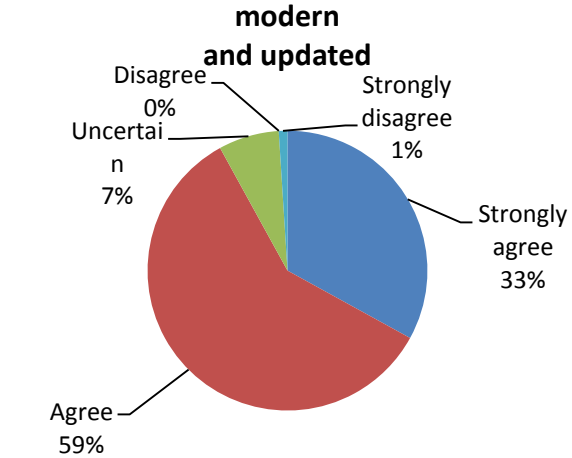
17. The course integrates theoretical course concepts with real-world applications



18. The assignments and exams covered the materials presented in the course



19. The course material is modern and updated



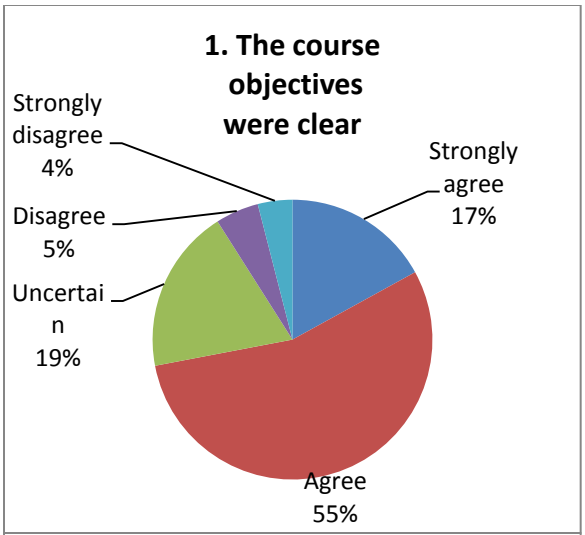
ii. Course Evaluation

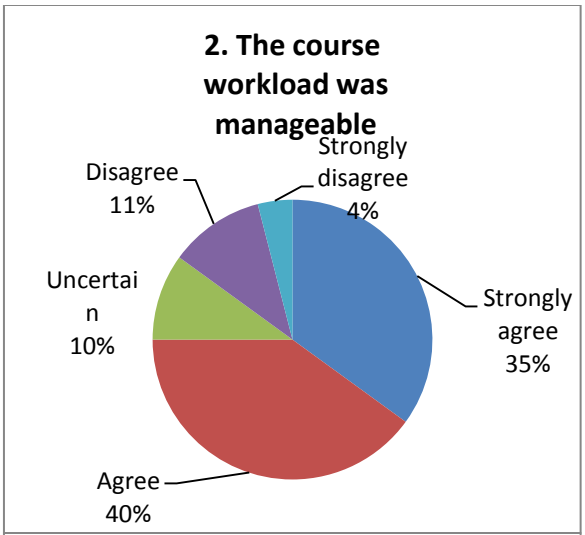
AGR-712	**Plant Water Relations**	**3(2-2)**	**Dr. Muhammad Ashraf**

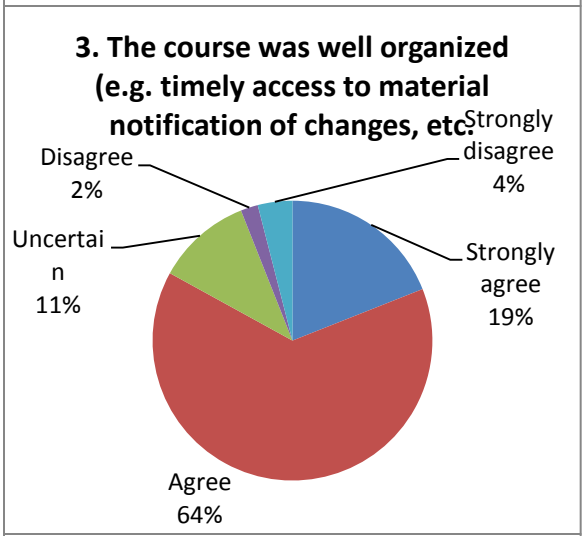
Data were collected from 5 Ph.D. students. The individual parameter showed that 17% the students strongly agreed, 55% agreed, 19 % uncertain, 5% disagreed and 4% strongly disagreed that the course objectives were clear. For the remaining parameters most of the students agreed that the course workload was manageable, well organized, the approximate level of student's attendance during the whole course was higher; students participated actively in the course and have made progress in this course. Most of the students agreed that the course was well structured to achieve the learning outcomes, learning and teaching methods encouraged participation, environment in the class was conductive to learning, and classrooms were satisfactory, learning materials were relevant and useful and recommended reading books were pertinent and appropriate. They described that the provision of learning resources in the library was adequate and the course stimulated their interest and thought on the subject area. According to most of the students, the pace of the course was appropriate, ideas and concepts were presented clearly, the method of assessment were reasonable.

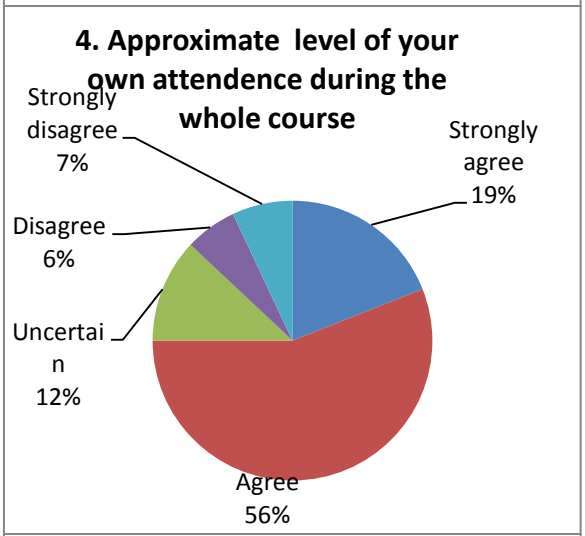
COMMENTS / SUGGESTIONS

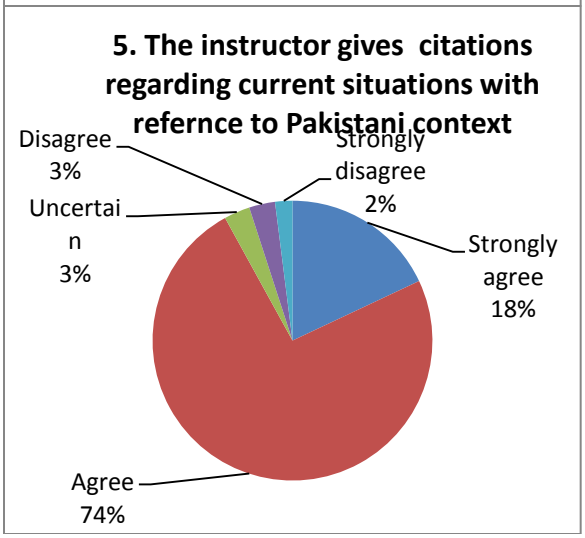
1. Concepts were clear through proper learning method.
2. Course contents were not properly organized.
3. Learning environment was good.
4. Practicals and field visits can improve the course effectiveness.
5. Proper class room should be provided for conducive environment.

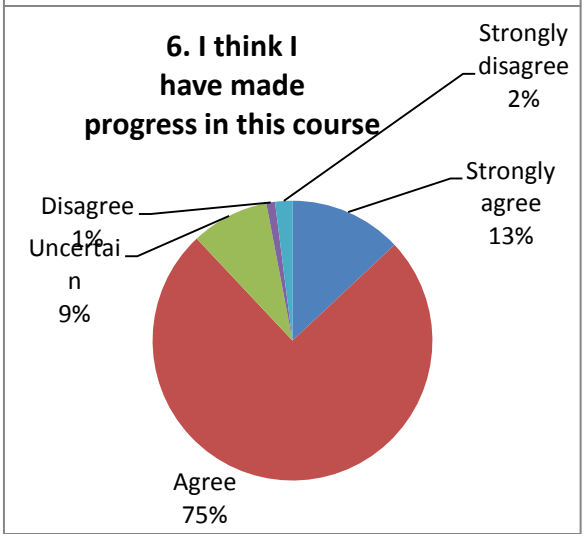

1. The course objectives were clear
Strongly disagree 4%
Disagree 5%
Uncertain 19%
Strongly agree 17%
Agree 55%

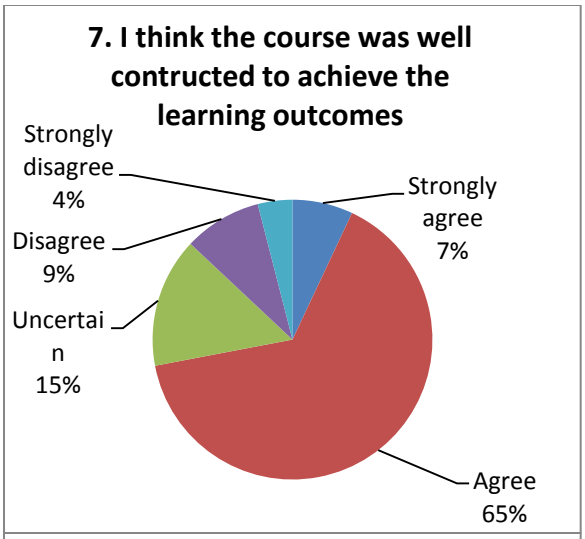

2. The course workload was manageable
Disagree 11%
Strongly disagree 4%
Uncertain 10%
Strongly agree 35%
Agree 40%

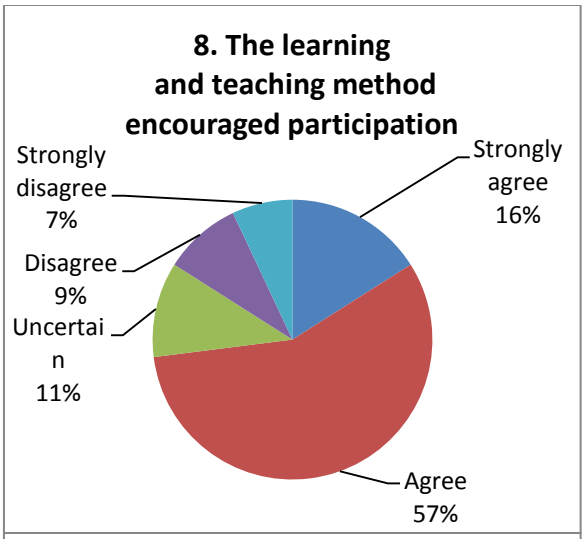

3. The course was well organized (e.g. timely access to material notification of changes, etc.
Disagree 2%
Strongly disagree 4%
Uncertain 11%
Strongly agree 19%
Agree 64%

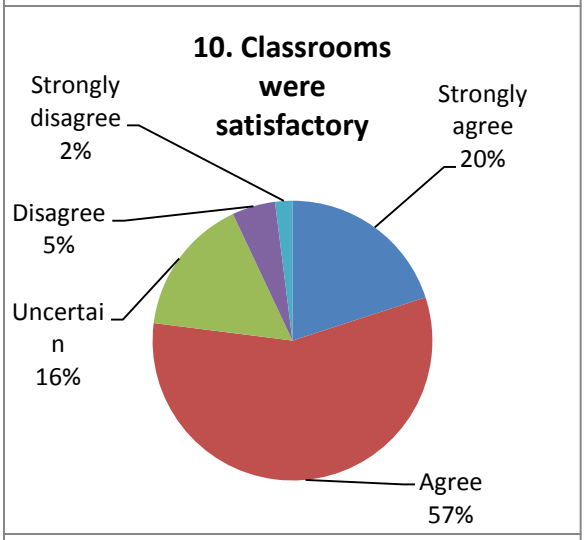

4. Approximate level of your own attendence during the whole course
Strongly disagree 7%
Strongly agree 19%
Disagree 6%
Uncertain 12%
Agree 56%

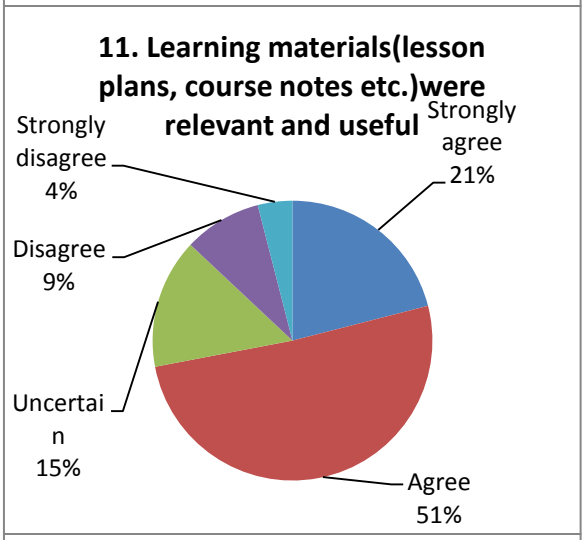

5. The instructor gives citations regarding current situations with refernce to Pakistani context
Disagree 3%
Strongly disagree 2%
Uncertain 3%
Strongly agree 18%
Agree 74%

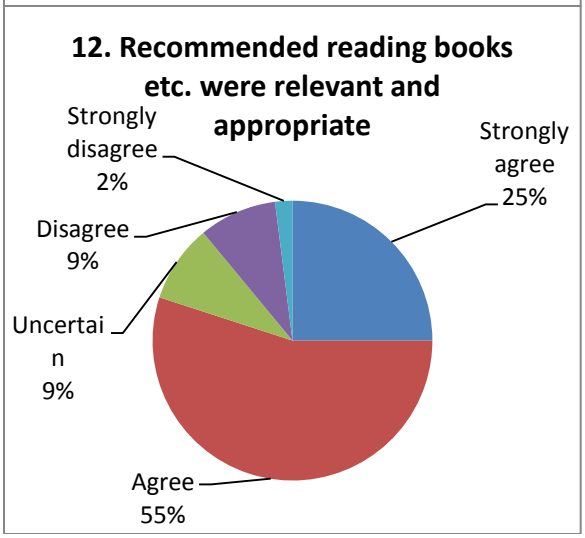

6. I think I have made progress in this course
Strongly disagree 2%
Strongly agree 13%
Disagree 1%
Uncertain 9%
Agree 75%

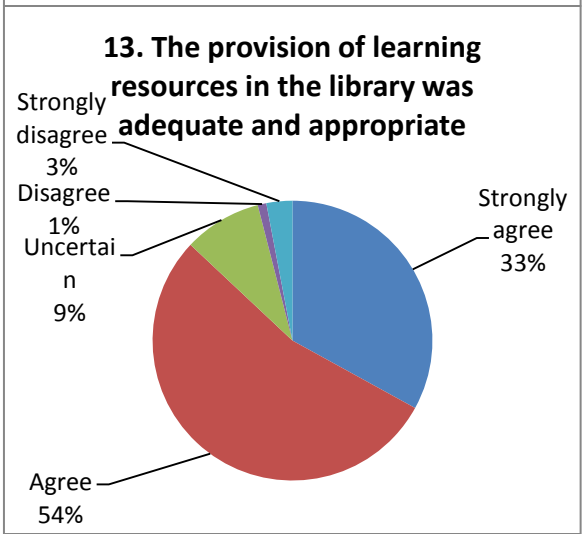

7. I think the course was well contructed to achieve the learning outcomes
Strongly disagree 4%
Strongly agree 7%
Disagree 9%
Uncertain 15%
Agree 65%

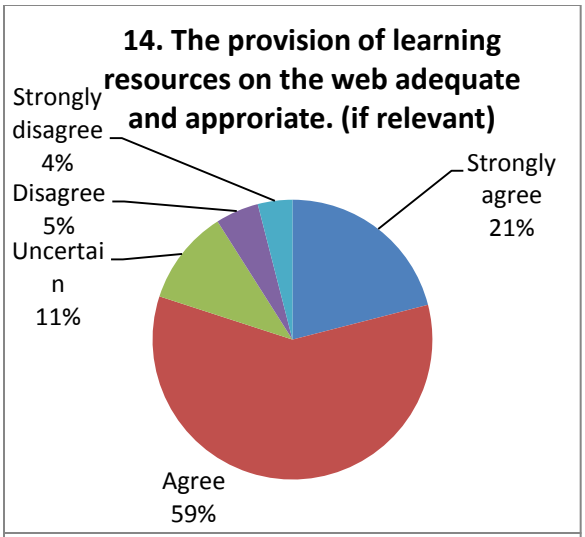

8. The learning and teaching method encouraged participation
Strongly disagree 7%
Strongly agree 16%
Disagree 9%
Uncertain 11%
Agree 57%

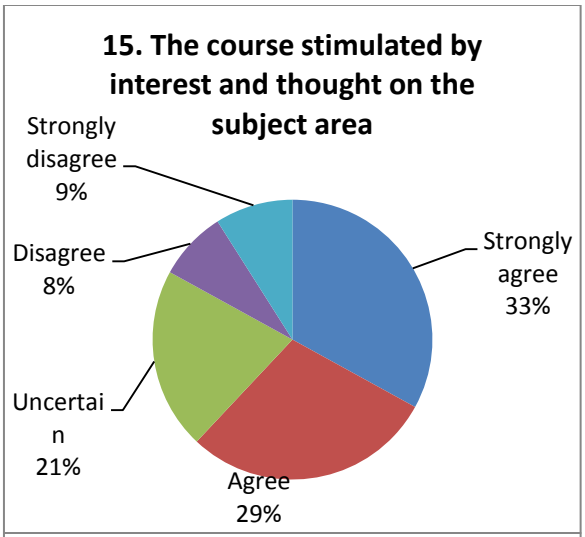

10. Classrooms were satisfactory
Strongly disagree 2%
Strongly agree 20%
Disagree 5%
Uncertain 16%
Agree 57%

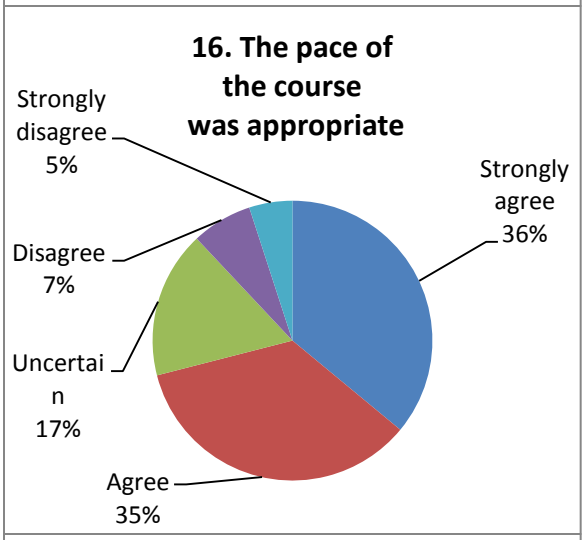

11. Learning materials(lesson plans, course notes etc.)were relevant and useful
Strongly disagree 4%
Strongly agree 21%
Disagree 9%
Uncertain 15%
Agree 51%

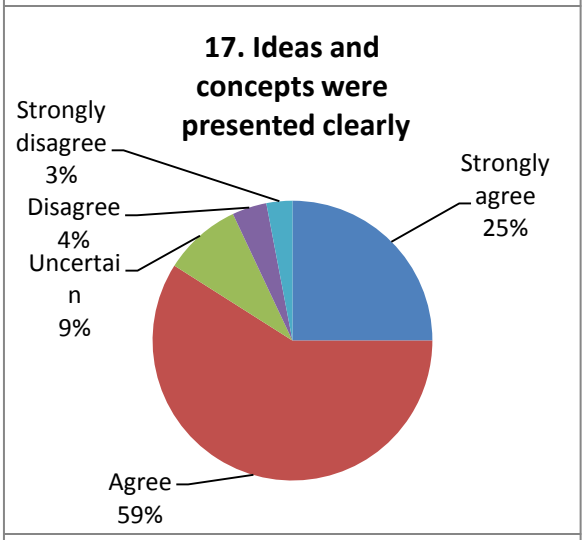

12. Recommended reading books etc. were relevant and appropriate
Strongly disagree 2%
Strongly agree 25%
Disagree 9%
Uncertain 9%
Agree 55%

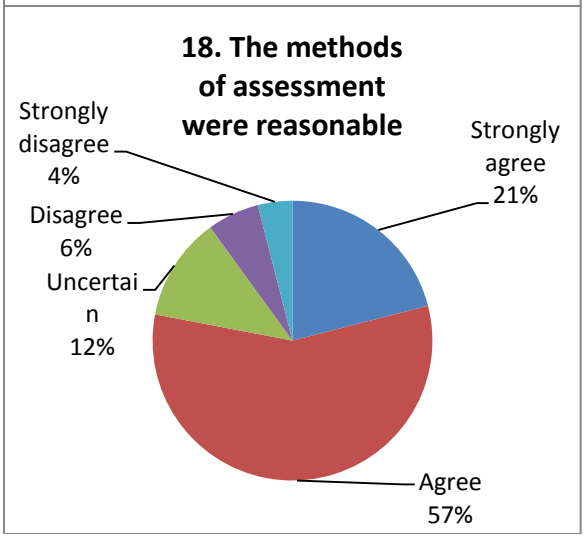

13. The provision of learning resources in the library was adequate and appropriate
Strongly disagree 3%
Disagree 1%
Strongly agree 33%
Uncertain 9%
Agree 54%

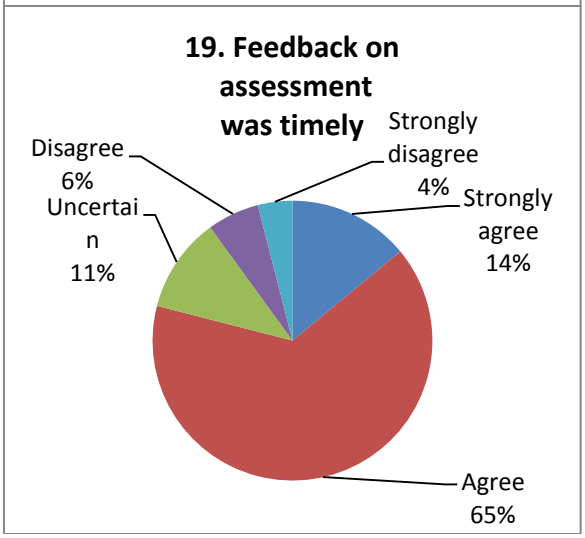

14. The provision of learning resources on the web adequate and approriate. (if relevant)
Strongly disagree 4%
Disagree 5%
Uncertain 11%
Strongly agree 21%
Agree 59%

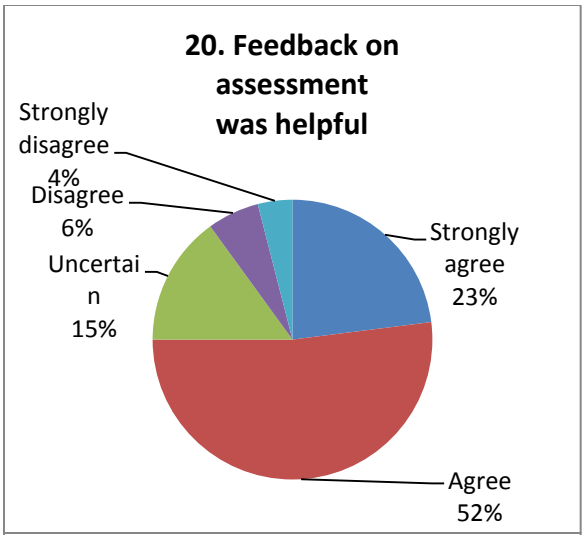

15. The course stimulated by interest and thought on the subject area
Strongly disagree 9%
Disagree 8%
Uncertain 21%
Strongly agree 33%
Agree 29%

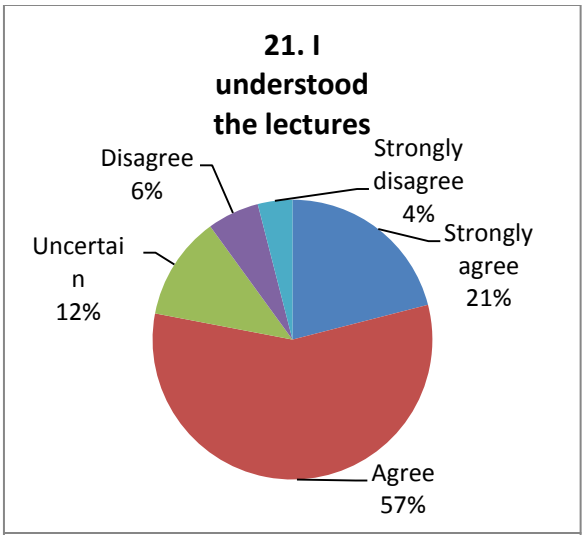

16. The pace of the course was appropriate
Strongly disagree 5%
Disagree 7%
Uncertain 17%
Strongly agree 36%
Agree 35%

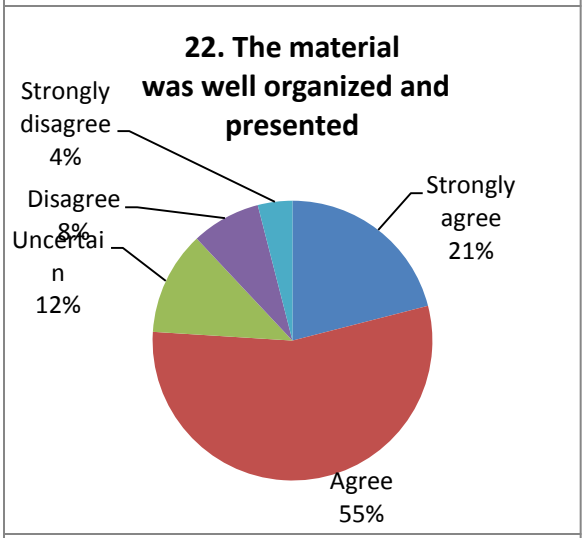

17. Ideas and concepts were presented clearly
Strongly disagree 3%
Disagree 4%
Uncertain 9%
Strongly agree 25%
Agree 59%

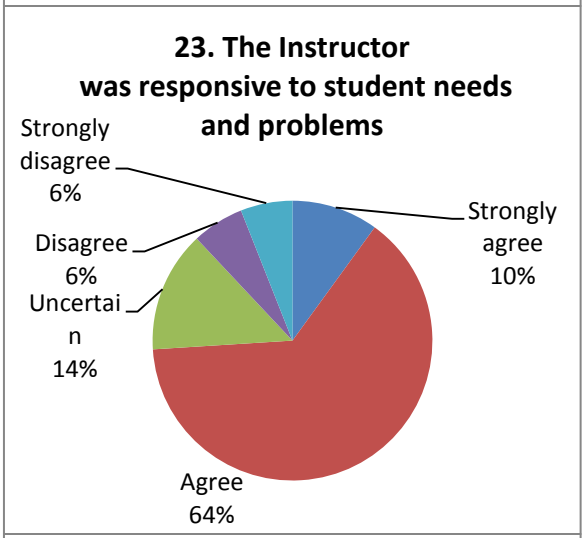

18. The methods of assessment were reasonable
Strongly disagree 4%
Disagree 6%
Uncertain 12%
Strongly agree 21%
Agree 57%

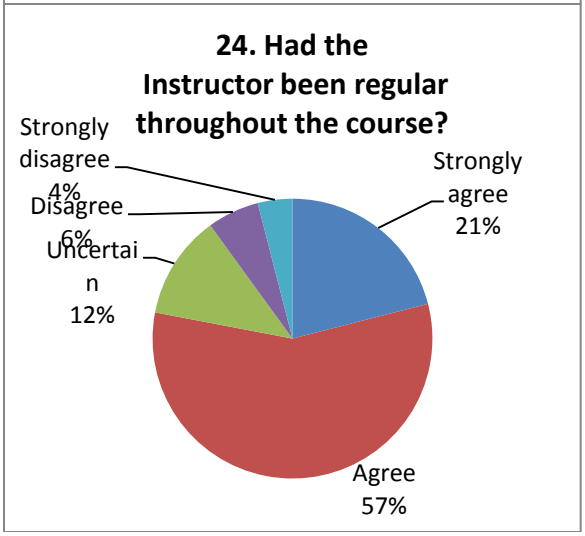

19. Feedback on assessment was timely
Disagree 6%
Uncertain 11%
Strongly disagree 4%
Strongly agree 14%
Agree 65%

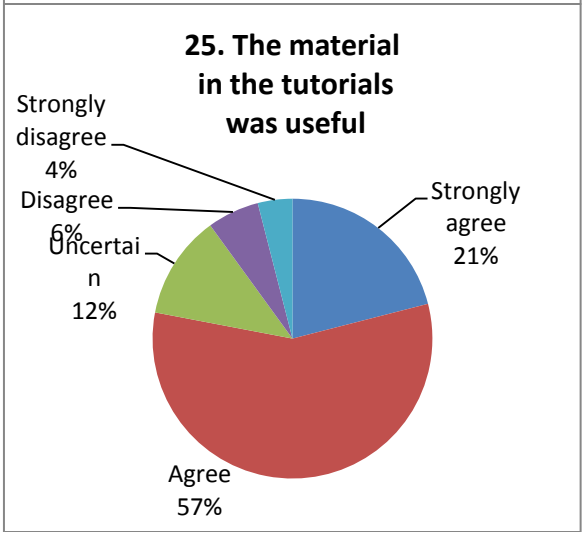

20. Feedback on assessment was helpful
Strongly disagree 4%
Disagree 6%
Uncertain 15%
Strongly agree 23%
Agree 52%

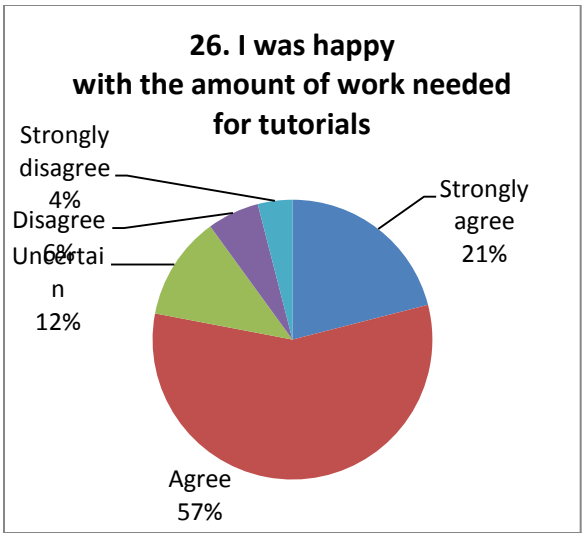

21. I understood the lectures
Disagree 6%
Strongly disagree 4%
Uncertain 12%
Strongly agree 21%
Agree 57%

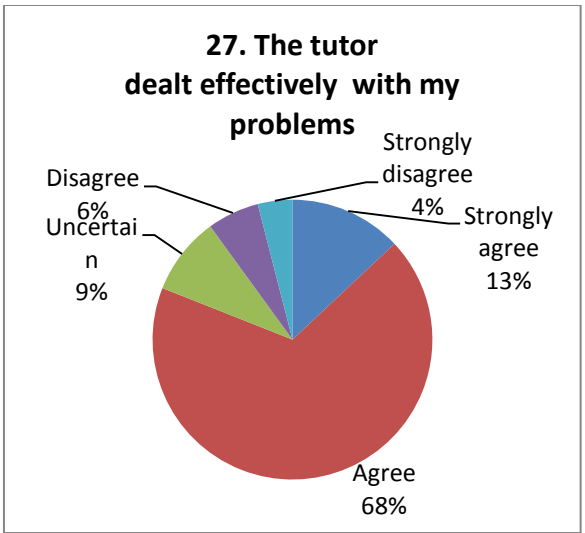

22. The material was well organized and presented
Strongly disagree 4%
Disagree 8%
Uncertain 12%
Strongly agree 21%
Agree 55%

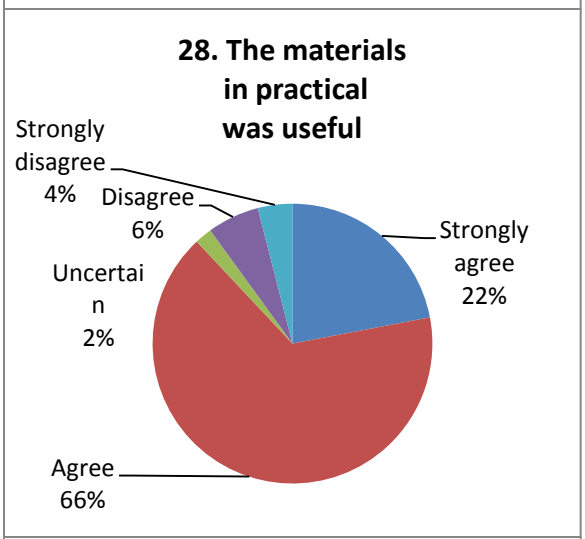

23. The Instructor was responsive to student needs and problems
Strongly disagree 6%
Disagree 6%
Uncertain 14%
Strongly agree 10%
Agree 64%

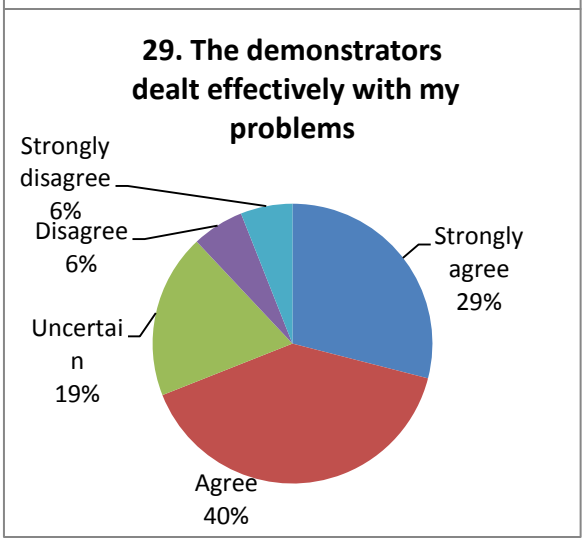

24. Had the Instructor been regular throughout the course?
Strongly disagree 4%
Disagree 6%
Uncertain 12%
Strongly agree 21%
Agree 57%

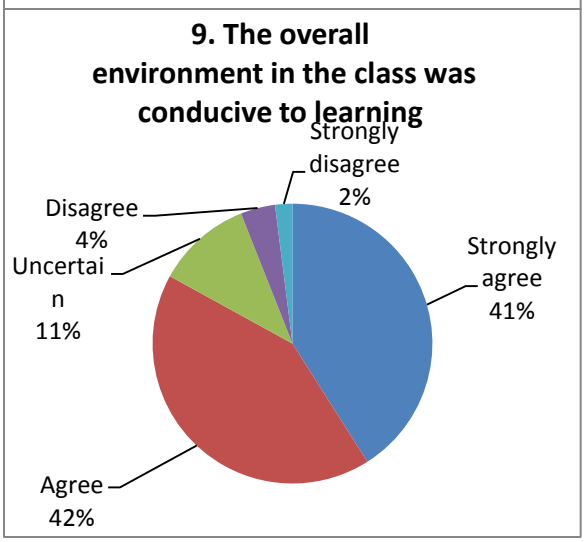

25. The material in the tutorials was useful
Strongly disagree 4%
Disagree 6%
Uncertain 12%
Strongly agree 21%
Agree 57%


26. I was happy with the amount of work needed for tutorials
Strongly disagree 4%
Disagree 6%
Uncertain 12%
Strongly agree 21%
Agree 57%


27. The tutor dealt effectively with my problems
Disagree 6%
Strongly disagree 4%
Uncertain 9%
Strongly agree 13%
Agree 68%


28. The materials in practical was useful
Strongly disagree 4%
Disagree 6%
Uncertain 2%
Strongly agree 22%
Agree 66%


29. The demonstrators dealt effectively with my problems
Strongly disagree 6%
Disagree 6%
Uncertain 19%
Strongly agree 29%
Agree 40%


9. The overall environment in the class was conducive to learning
Strongly disagree 2%
Disagree 4%
Uncertain 11%
Strongly agree 41%
Agree 42%

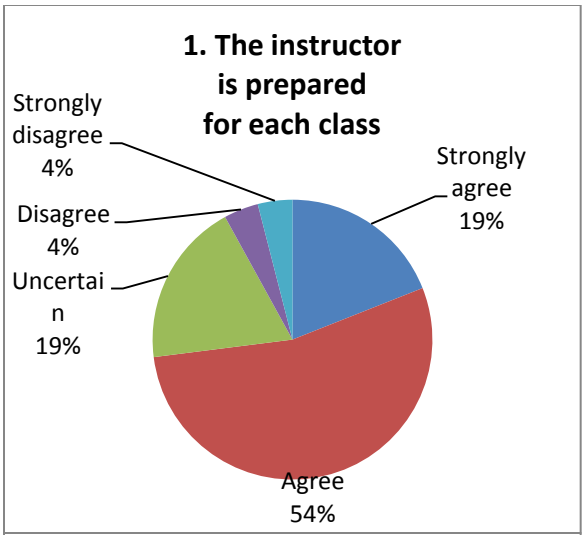
3. Dr. Fayyaz ul Hassan

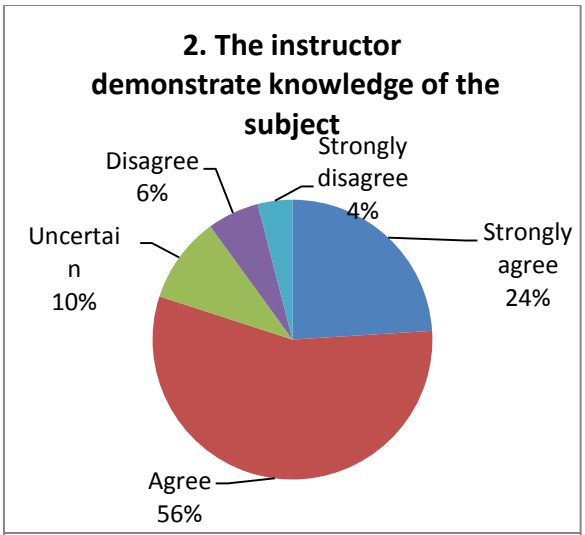
i. Teacher Evaluation

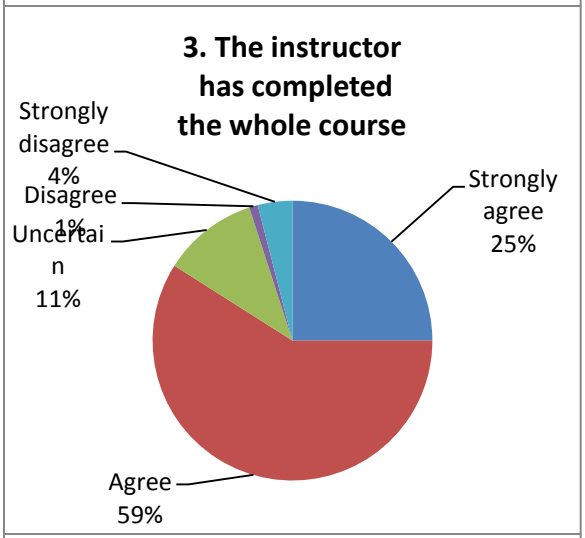
Data were collected from 5 Ph.D. students. Among the teachers, Prof. Dr. F.H. Sahi Prof. achieved the very good impact value of 4.23. Whereas, Prof. Dr. Muhammad Ashraf had an impact value of 4.41. The individual parameters showed that the 33% of the students strongly agreed, 39% agreed, 15% uncertain, 9% disagreed, and 4 % strongly disagreed that the teacher is fair in examination. Fifty four percent students agreed that the instructor came with good preparation in each class. Most of the students agreed that instructor demonstrates knowledge of the subject, instructor had completed the whole course, the Instructor provided additional material apart from the textbook, the instructor gave citations regarding current situations with reference to Pakistani context, the instructor communicates the subject matter, the instructor shows respect towards students and encourages class participation effectively, the instructor maintained an environment that was conducive to learning, the instructor arrived on time, the instructor returned the graded scripts etc. in a reasonable amount of time, the instructor was available during the specified office hours after class for consultations, the Subject matter presented in the course has increased their knowledge of the subject.

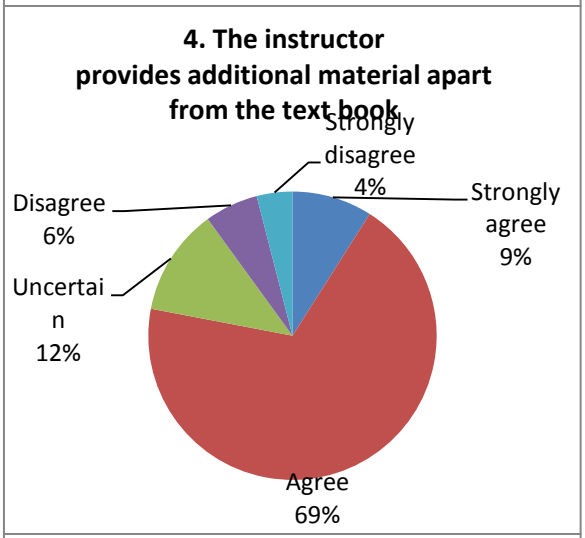
Comments/Suggestions

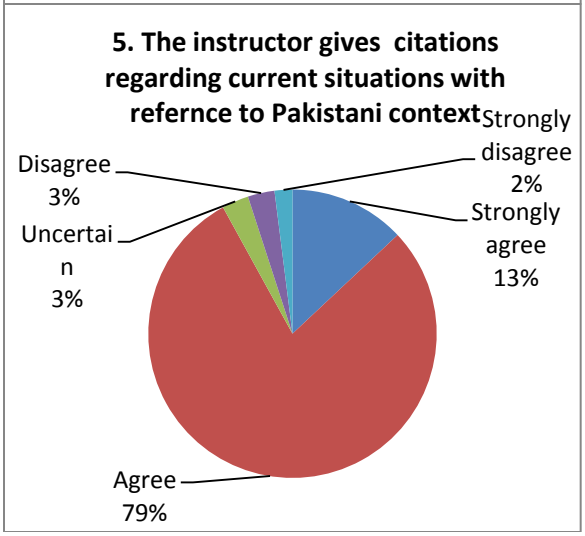
1. General information given by teacher based on his practical experience from the prevalent environment was indeed very effective.
2. Good behavior of the teacher and was available any time.
3. Course was completed in due time and was very interesting.

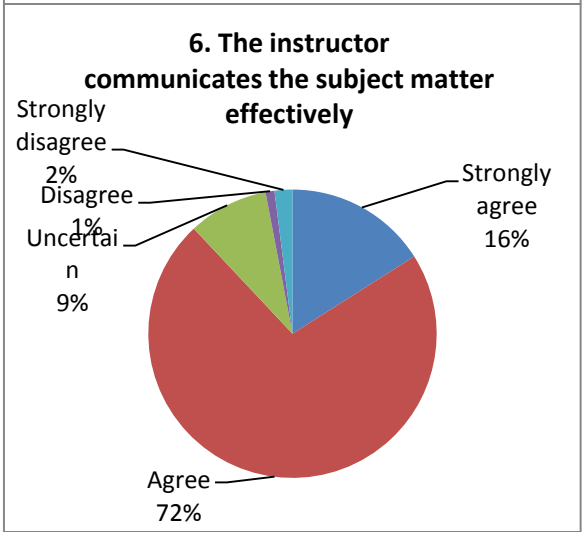

1. The instructor is prepared for each class
Strongly disagree 4%
Disagree 4%
Uncertain 19%
Agree 54%
Strongly agree 19%

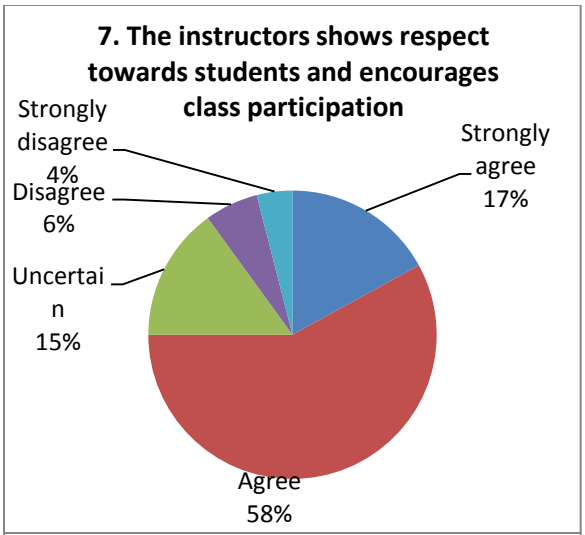

2. The instructor demonstrate knowledge of the subject
Disagree 6%
Strongly disagree 4%
Uncertain 10%
Strongly agree 24%
Agree 56%

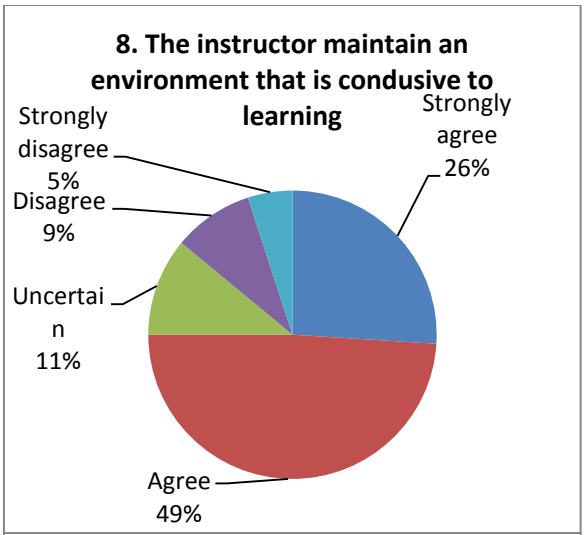

3. The instructor has completed the whole course
Strongly disagree 4%
Disagree 1%
Uncertain 11%
Agree 59%
Strongly agree 25%

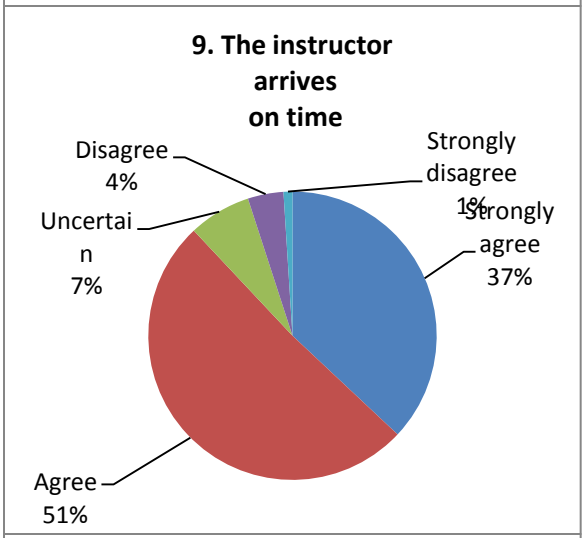

4. The instructor provides additional material apart from the text book
Strongly disagree 4%
Disagree 6%
Uncertain 12%
Agree 69%
Strongly agree 9%

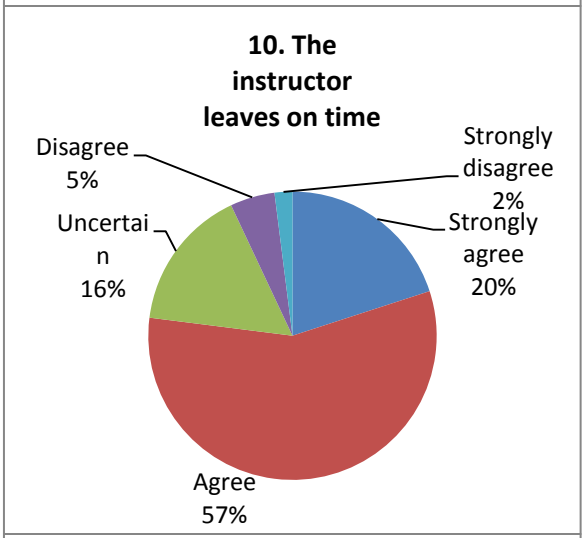

5. The instructor gives citations regarding current situations with refernce to Pakistani context
Disagree 3%
Strongly disagree 2%
Uncertain 3%
Strongly agree 13%
Agree 79%

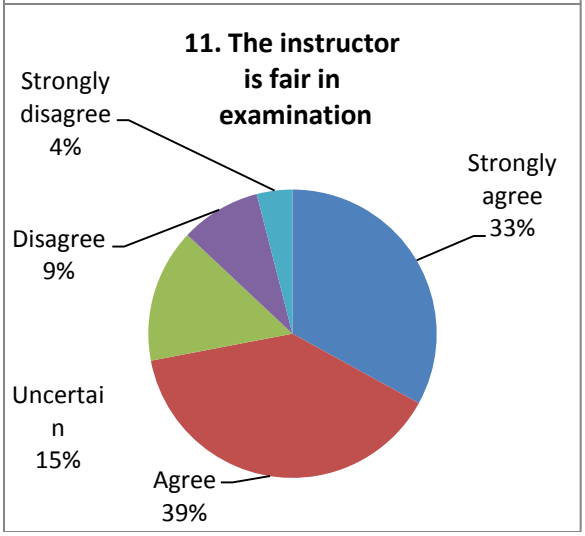

6. The instructor communicates the subject matter effectively
Strongly disagree 2%
Disagree 1%
Uncertain 9%
Strongly agree 16%
Agree 72%

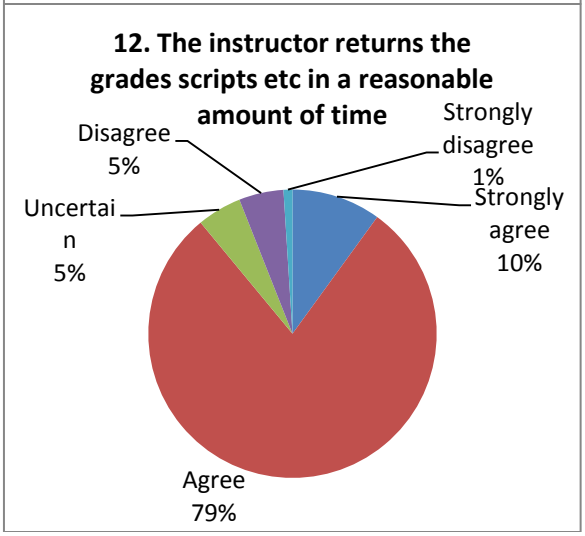

7. The instructors shows respect towards students and encourages class participation
Strongly disagree 4%
Disagree 6%
Uncertain 15%
Agree 58%
Strongly agree 17%

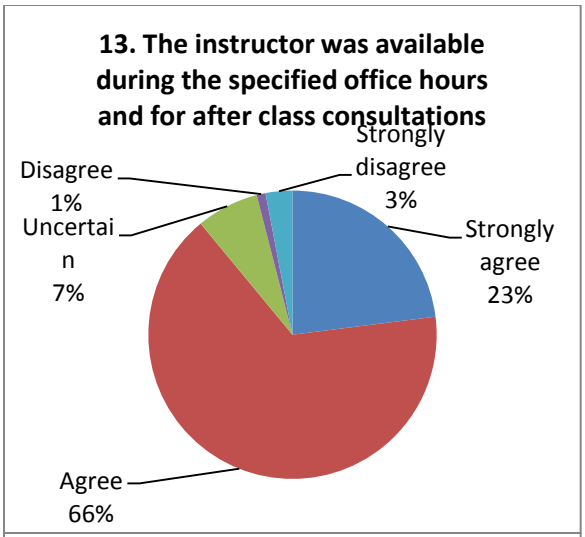

8. The instructor maintain an environment that is condusive to learning
Strongly disagree 5%
Disagree 9%
Uncertain 11%
Agree 49%
Strongly agree 26%

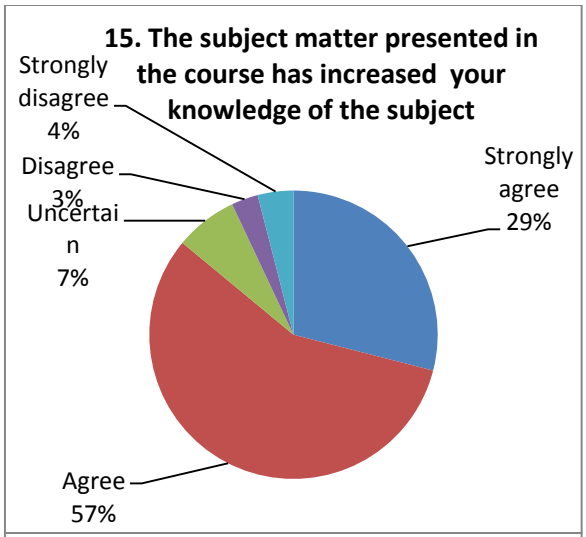

9. The instructor arrives on time
Disagree 4%
Uncertain 7%
Agree 51%
Strongly disagree 1%
Strongly agree 37%

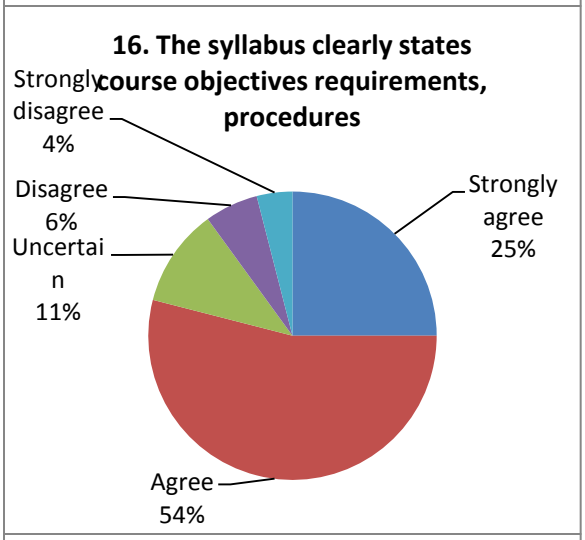

10. The instructor leaves on time
Disagree 5%
Uncertain 16%
Agree 57%
Strongly disagree 2%
Strongly agree 20%

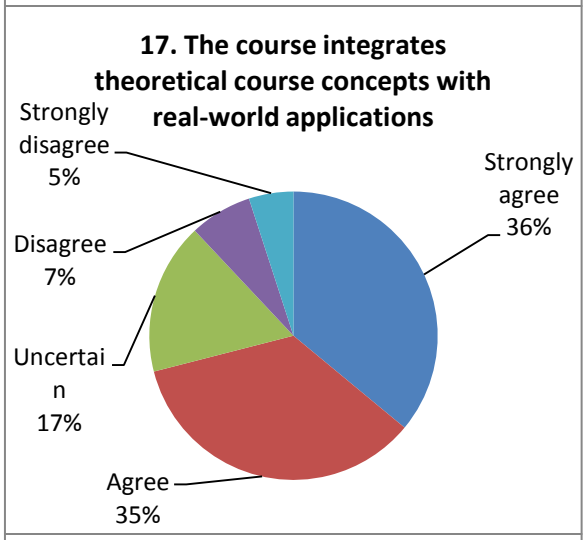

11. The instructor is fair in examination
Strongly disagree 4%
Disagree 9%
Uncertain 15%
Agree 39%
Strongly agree 33%

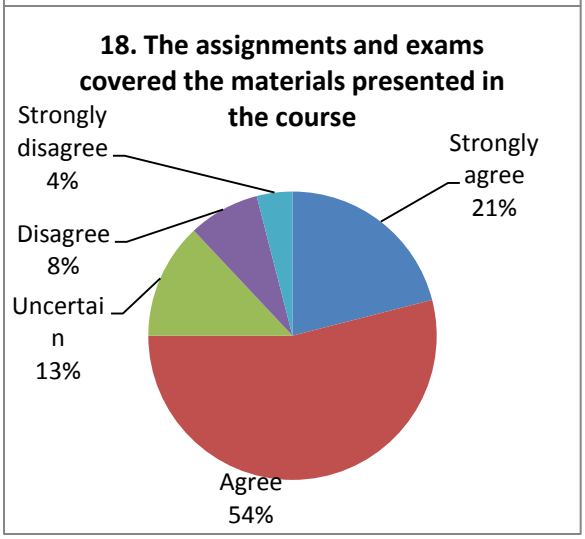

12. The instructor returns the grades scripts etc in a reasonable amount of time
Disagree 5%
Uncertain 5%
Agree 79%
Strongly disagree 1%
Strongly agree 10%

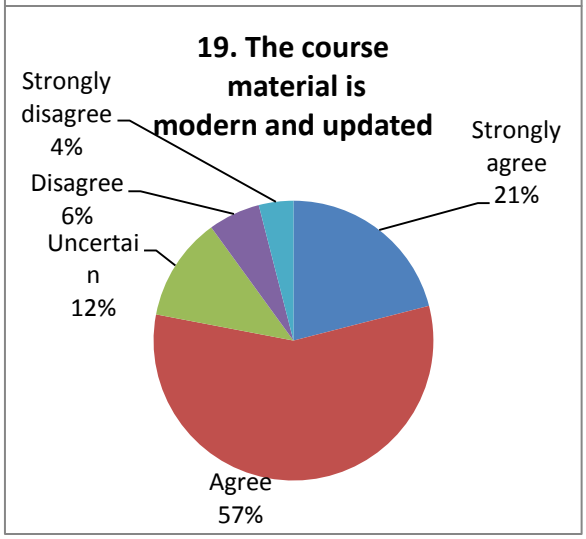

13. The instructor was available during the specified office hours and for after class consultations
Strongly disagree 3%
Disagree 1%
Uncertain 7%
Strongly agree 23%
Agree 66%


15. The subject matter presented in the course has increased your knowledge of the subject
Strongly disagree 4%
Disagree 3%
Uncertain 7%
Strongly agree 29%
Agree 57%


16. The syllabus clearly states course objectives requirements, procedures
Strongly disagree 4%
Disagree 6%
Uncertain 11%
Strongly agree 25%
Agree 54%


17. The course integrates theoretical course concepts with real-world applications
Strongly disagree 5%
Disagree 7%
Uncertain 17%
Strongly agree 36%
Agree 35%


18. The assignments and exams covered the materials presented in the course
Strongly disagree 4%
Disagree 8%
Uncertain 13%
Strongly agree 21%
Agree 54%


19. The course material is modern and updated
Strongly disagree 4%
Disagree 6%
Uncertain 12%
Strongly agree 21%
Agree 57%

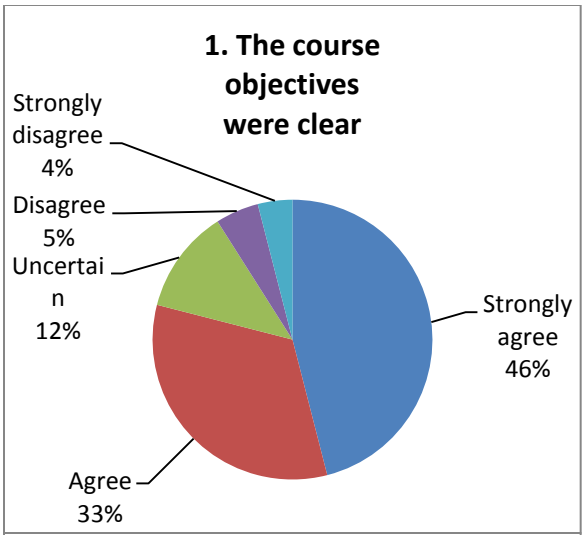
ii. Course Evaluation

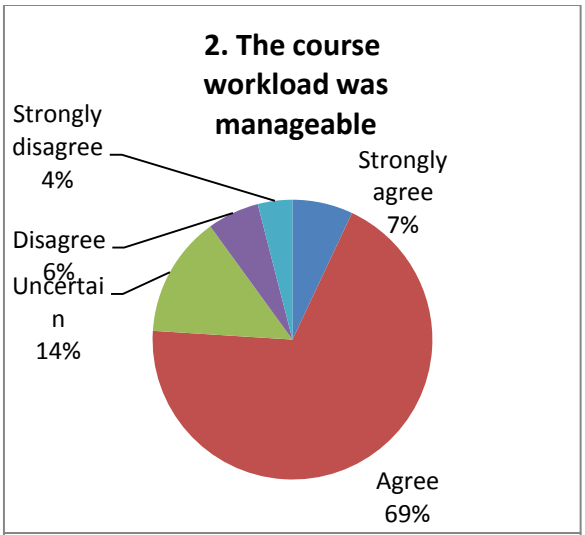
AGR-717	**Integrated Agriculture**	**3(3-0)**	**Prof.Dr. Fayyaz ul Hassan**

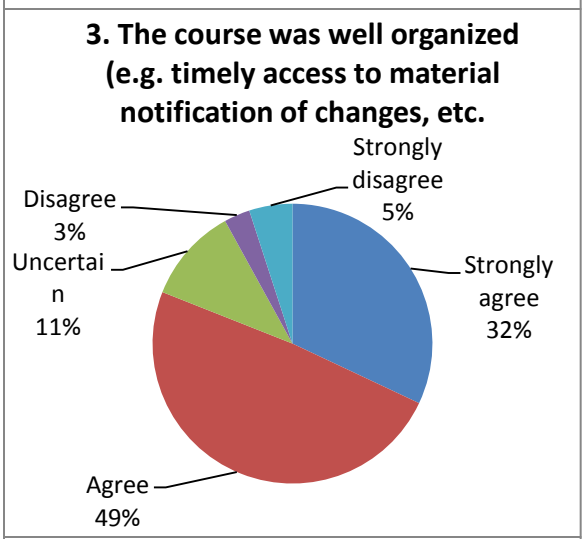
Data were collected from 5 Ph.D. students. Comparative graph of course evaluation showed that the course (AGR-717) taught by Prof. Dr. F. H. Sahi had an impact value of 4.2. The individual parameter showed that 46% the students strongly agreed, 53% agreed, 12 % uncertain, 5% disagreed and 4% strongly disagreed that the course objectives were clear. Moreover, most of the students agreed that the course well organized, the course was well structured to achieve the learning outcomes, learning and teaching methods encouraged participation, the overall environment in the class was conductive to learning, and classrooms were satisfactory, learning materials were relevant and useful, recommended reading books etc. were relevant and appropriate. Also the provision of learning resources in the library was adequate and the course stimulated their interest and thought on the subject area, ideas and concepts were presented clearly, the material was well organized.The instructor was responsive to student needs and problems, regular throughout the course.

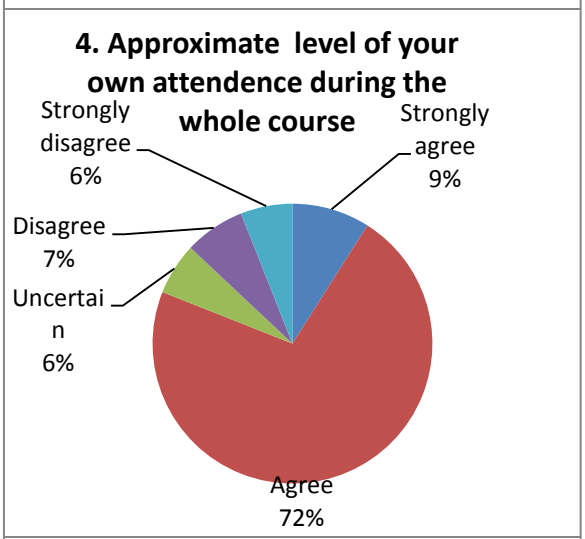
Comments/Suggestions:

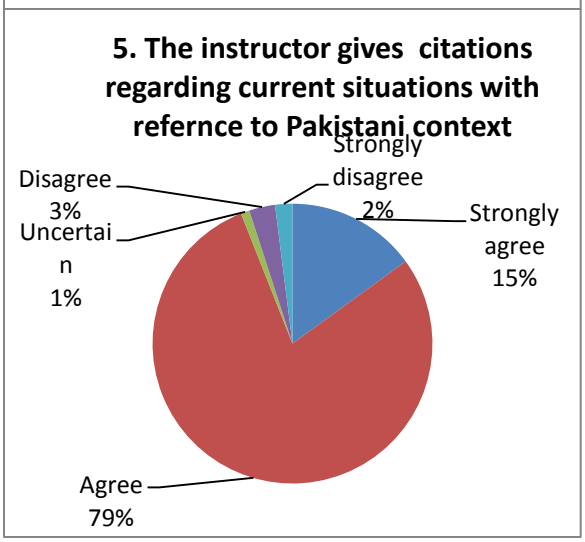
1. More practicals will improve the course.
2. Lab equipments were not adequate.
3. Projector and multimedia should be used to deliver lectures.
4. Proper materials were not available for practical demonstrations.
5. Course was informative and interesting

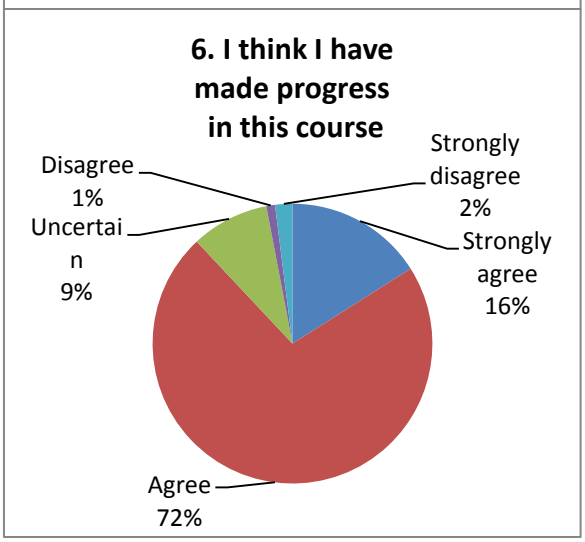

1. The course objectives were clear
Strongly disagree 4%
Disagree 5%
Uncertain 12%
Strongly agree 46%
Agree 33%

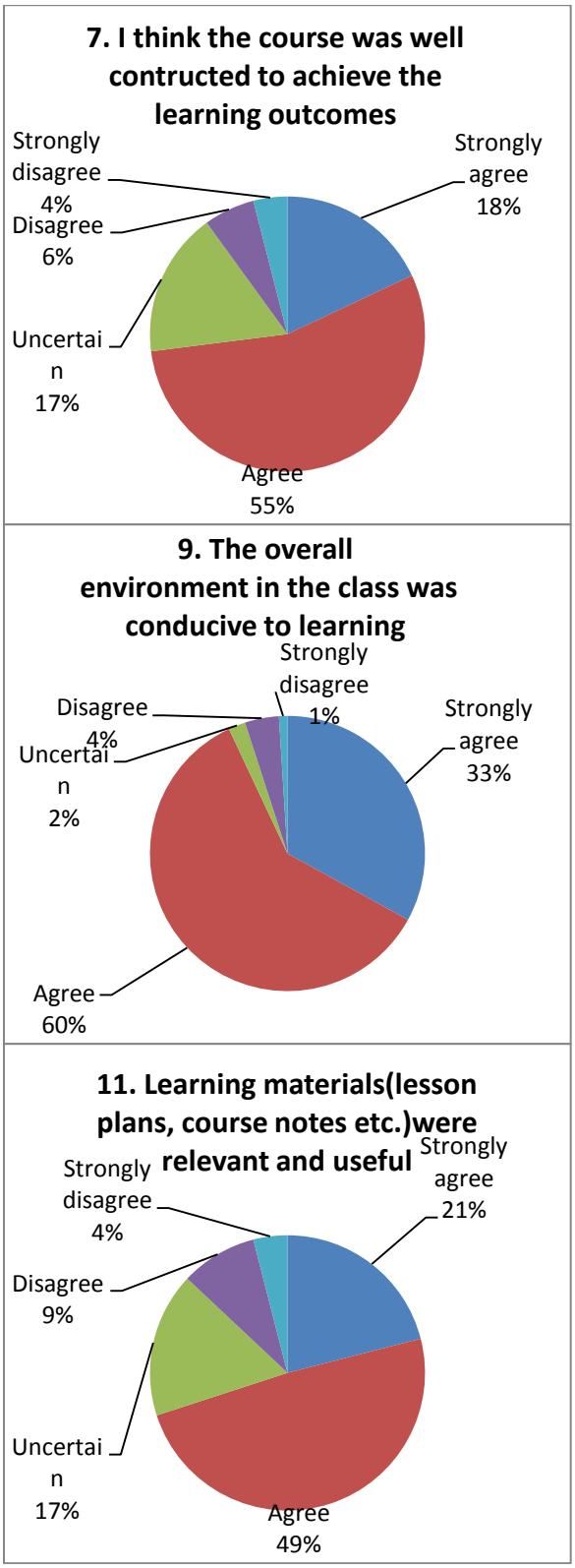

2. The course workload was manageable
Strongly disagree 4%
Disagree 6%
Uncertain 14%
Strongly agree 7%
Agree 69%

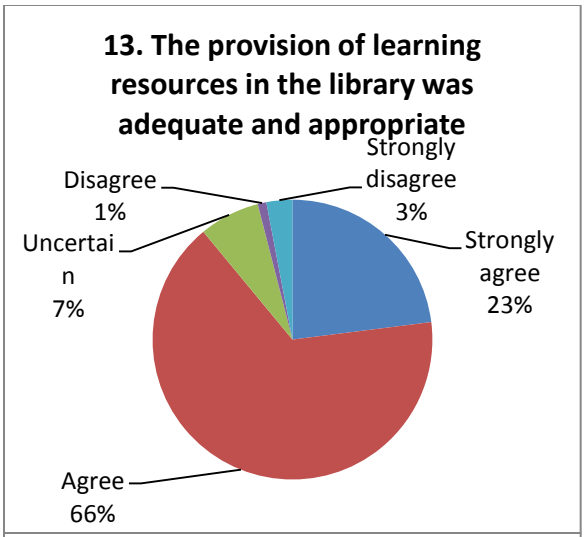

3. The course was well organized (e.g. timely access to material notification of changes, etc.
Strongly disagree 5%
Disagree 3%
Uncertain 11%
Strongly agree 32%
Agree 49%

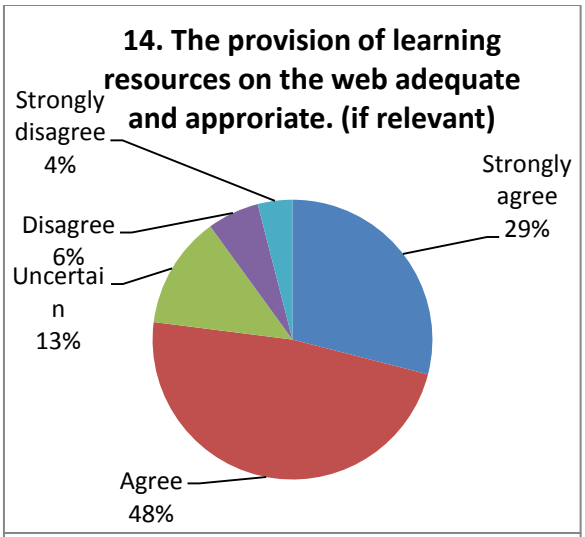

4. Approximate level of your own attendence during the whole course
Strongly disagree 6%
Disagree 7%
Uncertain 6%
Strongly agree 9%
Agree 72%

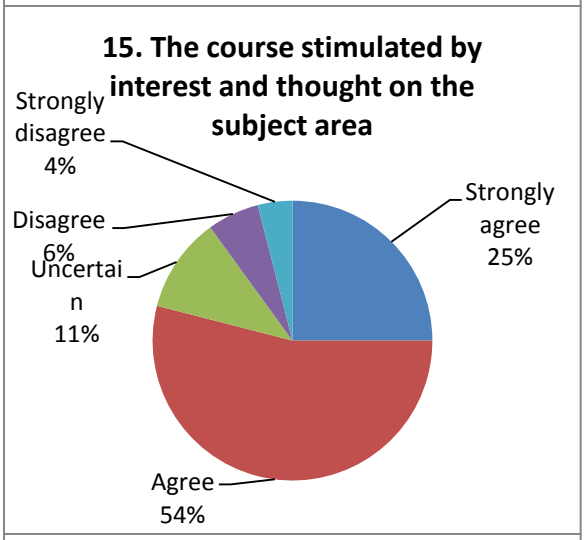

5. The instructor gives citations regarding current situations with refernce to Pakistani context
Strongly disagree 2%
Disagree 3%
Uncertain 1%
Strongly agree 15%
Agree 79%

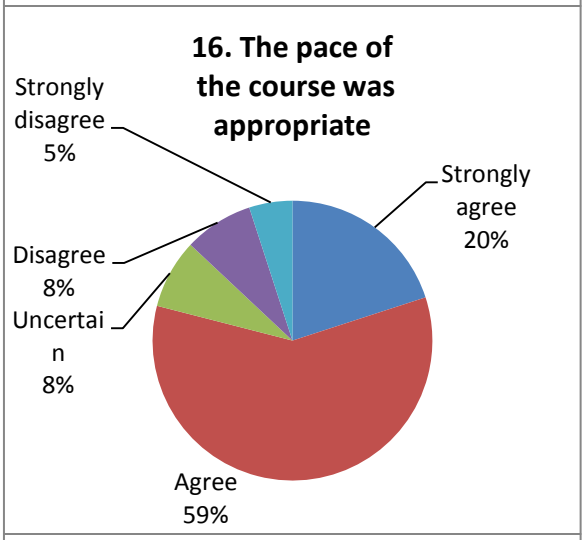

6. I think I have made progress in this course
Disagree 1%
Uncertain 9%
Strongly disagree 2%
Strongly agree 16%
Agree 72%

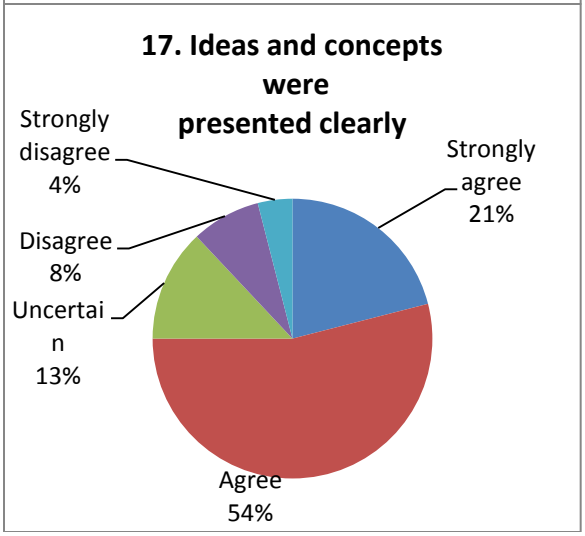

7. I think the course was well contructed to achieve the learning outcomes
Strongly disagree 4%
Disagree 6%
Uncertain 17%
Agree 55%
Strongly agree 18%
8. The learning and teaching method encouraged participation
Strongly disagree 5%
Disagree 9%
Uncertain 11%
Agree 49%
Strongly agree 26%
9. The overall environment in the class was conducive to learning
Strongly disagree 1%
Disagree 4%
Uncertain 2%
Agree 60%
Strongly agree 33%
10. Classrooms were satisfactory
Strongly disagree 2%
Disagree 5%
Uncertain 16%
Agree 57%
Strongly agree 20%
11. Learning materials(lesson plans, course notes etc.)were relevant and useful
Strongly disagree 4%
Disagree 9%
Uncertain 17%
Agree 49%
Strongly agree 21%
12. Recommended reading books etc. were relevant and appropriate
Strongly disagree 1%
Disagree 5%
Uncertain 4%
Agree 55%
Strongly agree 35%

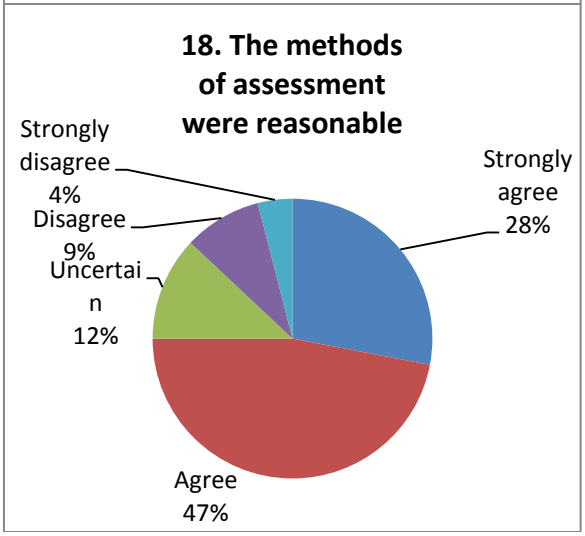

13. The provision of learning resources in the library was adequate and appropriate
Strongly disagree 3%
Disagree 1%
Uncertain 7%
Strongly agree 23%
Agree 66%

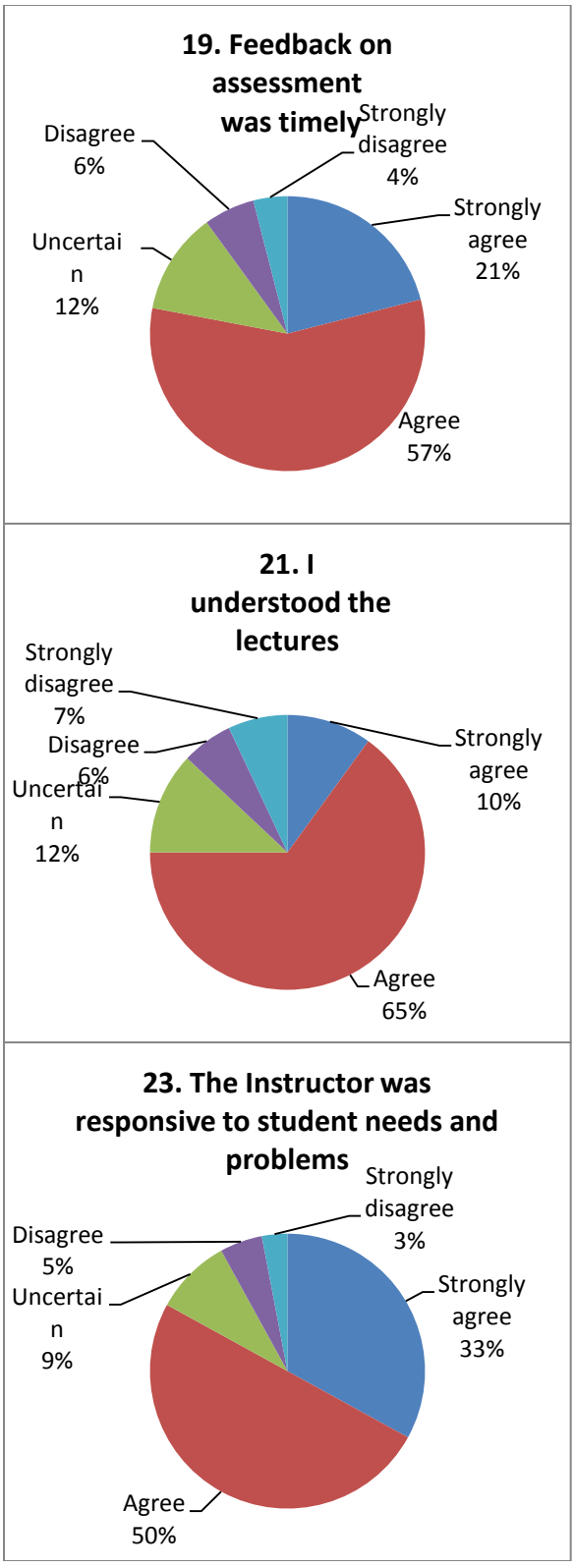

14. The provision of learning resources on the web adequate and approriate. (if relevant)
Strongly disagree 4%
Disagree 6%
Uncertain 13%
Strongly agree 29%
Agree 48%

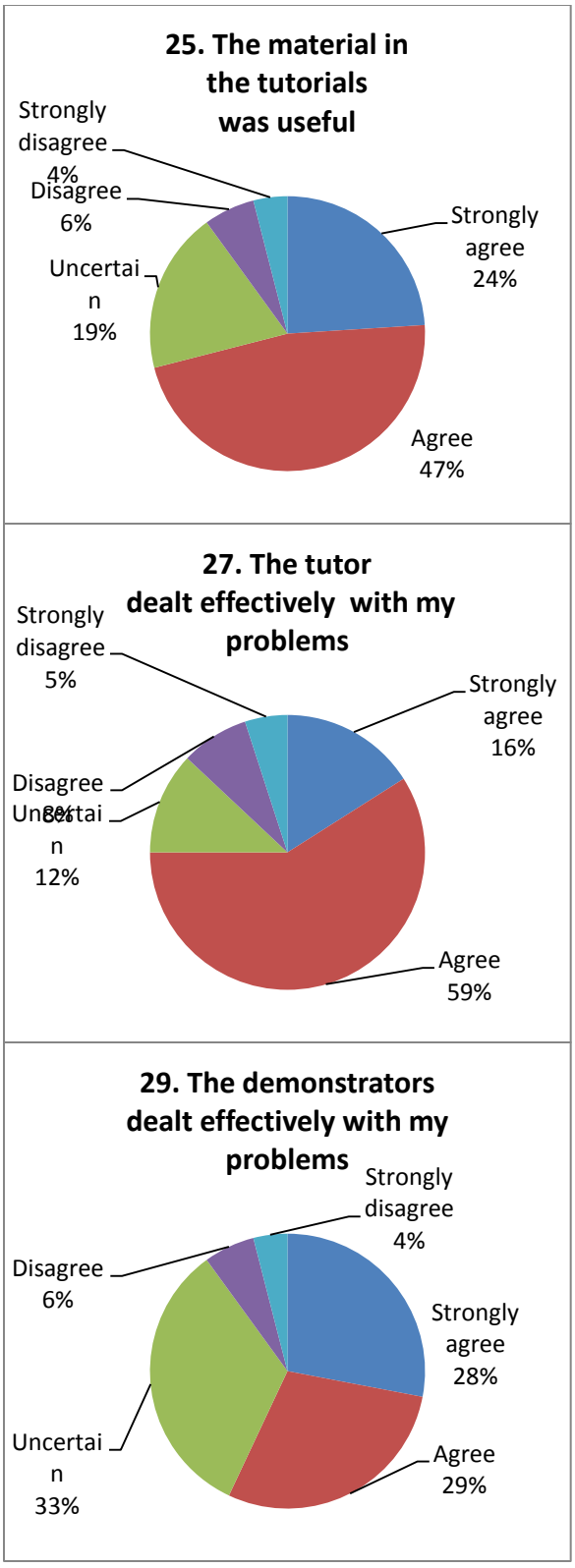

15. The course stimulated by interest and thought on the subject area
Strongly disagree 4%
Disagree 6%
Uncertain 11%
Strongly agree 25%
Agree 54%


16. The pace of the course was appropriate
Strongly disagree 5%
Disagree 8%
Uncertain 8%
Strongly agree 20%
Agree 59%


17. Ideas and concepts were presented clearly
Strongly disagree 4%
Disagree 8%
Uncertain 13%
Strongly agree 21%
Agree 54%


18. The methods of assessment were reasonable
Strongly disagree 4%
Disagree 9%
Uncertain 12%
Strongly agree 28%
Agree 47%


19. Feedback on assessment was timely
Strongly disagree 4%
Disagree 6%
Uncertain 12%
Strongly agree 21%
Agree 57%
20. Feedback on assessment was helpful
Strongly disagree 4%
Disagree 6%
Uncertain 10%
Strongly agree 11%
Agree 69%
21. I understood the lectures
Strongly disagree 7%
Disagree 6%
Uncertain 12%
Strongly agree 10%
Agree 65%
22. The material was well organized and presented
Strongly disagree 4%
Disagree 5%
Uncertain 13%
Strongly agree 19%
Agree 59%
23. The Instructor was responsive to student needs and problems
Strongly disagree 3%
Disagree 5%
Uncertain 9%
Strongly agree 33%
Agree 50%
24. Had the Instructor been regular throughout the course?
Strongly disagree 4%
Disagree 6%
Uncertain 12%
Strongly agree 21%
Agree 57%


25. The material in the tutorials was useful
Strongly disagree 4%
Disagree 6%
Uncertain 19%
Strongly agree 24%
Agree 47%
26. I was happy with the amount of work needed for tutorials
Strongly disagree 4%
Disagree 6%
Uncertain 11%
Strongly agree 10%
Agree 69%
27. The tutor dealt effectively with my problems
Strongly disagree 5%
Disagree 8%
Uncertain 12%
Strongly agree 16%
Agree 59%
28. The materials in practical was useful
Strongly disagree 4%
Disagree 6%
Uncertain 12%
Strongly agree 21%
Agree 57%
29. The demonstrators dealt effectively with my problems
Strongly disagree 4%
Disagree 6%
Uncertain 33%
Strongly agree 28%
Agree 29%

Performa 2: Faculty Course Review Report

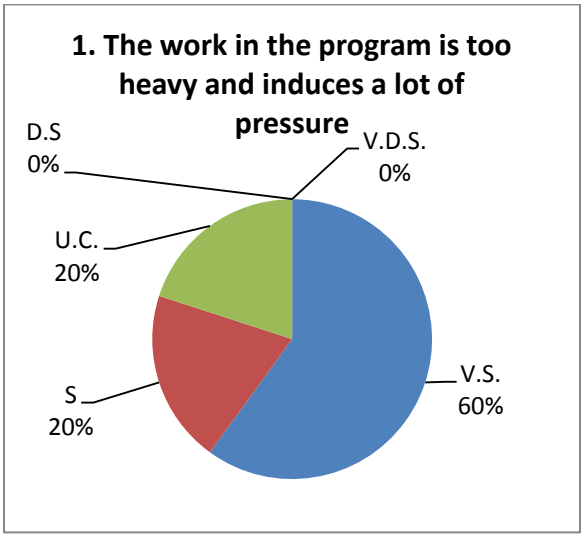
The evaluation revealed that the faculty is satisfied with curriculum. Questionnaire for the evaluation has been filled and analyzed. The internal evaluation was done through with mid and final term examinations for all courses offered by department. Some of the teachers suggested division of certain courses as they were lengthy.

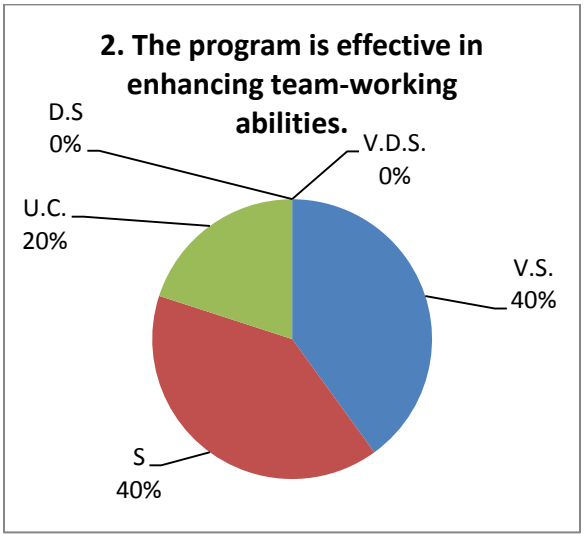
Table 3: Faculty Course Review Report

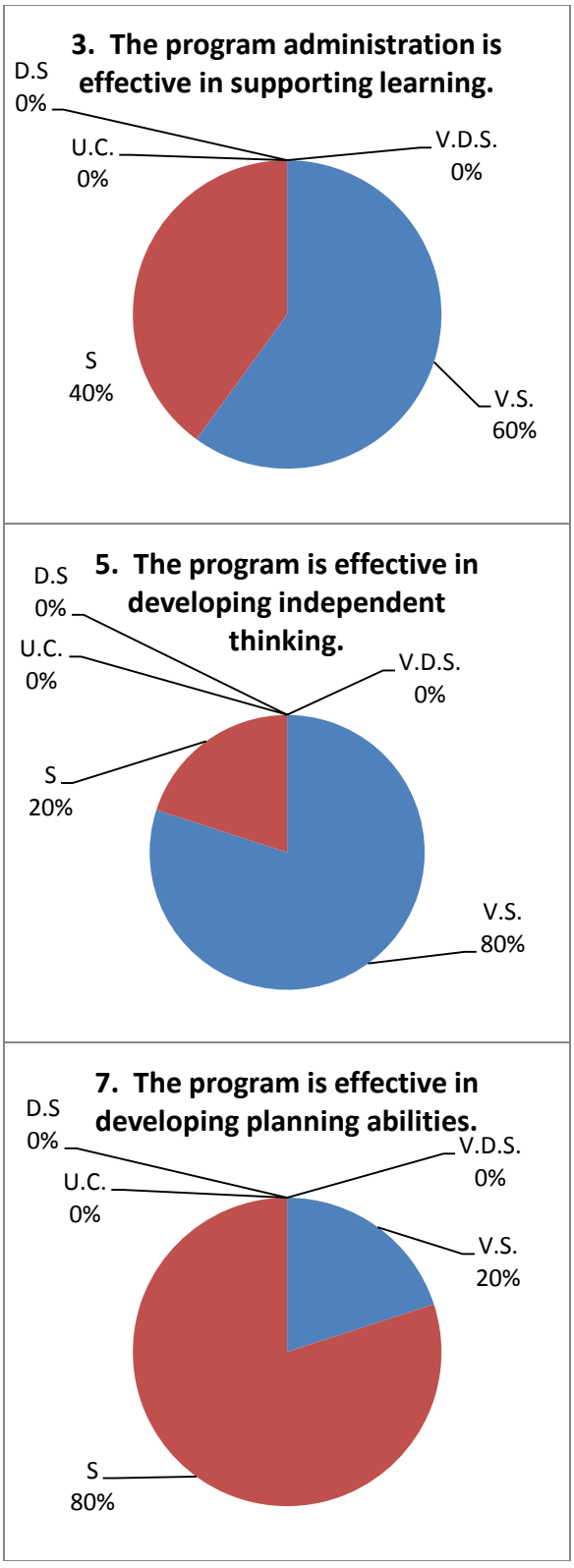
Course code	Title	Credit Value	Assessment Methods/ Exams	No. of Students	comments on curriculum	Any changes for future in course	Semester	%Grade						Course Instructor
								A	B	C	D	E	F	
AGR-710	Crop Nutrition	3(2-2)	Midterm And Final	10	Good but lengthy	Should be divided	Fall	55	26	19	-	-	-	Dr. Muhammad Ashraf
AGR-712	Plant Water Relations	3(2-2)	Midterm And Final	10	Good but lengthy	Should be divided	Spring	61	24	15	-	-	-	Dr. Muhammad Ashraf
AGR-717	Integrated Agriculture	3(2-2)	Midterm And Final	24	Good but lengthy	Should be divided	Fall	59	31	10	-	-	-	Dr. Fayyaz-ul-Hassan Sahi

Performa 3: Survey of Graduating Students

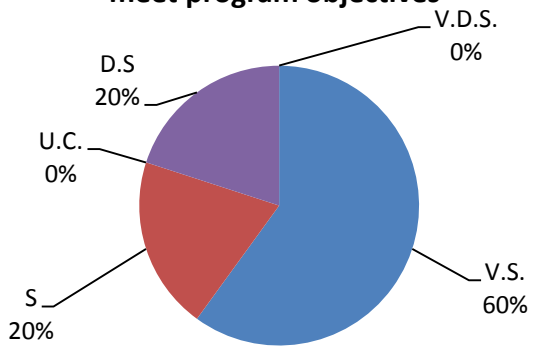
A total of 10 students were included in the survey. The data showed that 60% of the students were very satisfied (VS), 20% satisfied,20% uncertain, 0% dissatisfied and 0% very dissatisfied for the work in the program is too heavy. For the other parameters, most of the students were very satisfied with program administration, development of analytical and problem solving skills, the program is effective in developing independent thinking, written communication skills and planning abilities, the contents of curriculum are advanced and meet program objectives, faculty was able to meet the program objectives and the environment was conducive for learning.



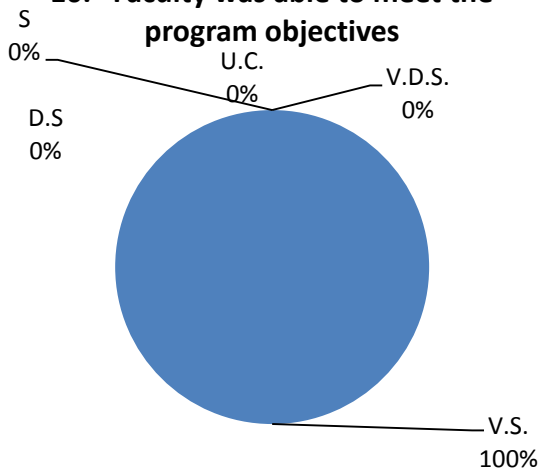



3. The program administration is effective in supporting learning.
D.S 0%
U.C. 0%
V.D.S. 0%
S 40%
V.S. 60%
4. The program is effective in developi ng analytical and problem solving skills.
U.C. 0%
D.S 0%
V.D.S. 0%
S 40%
V.S. 60%
5. The program is effective in developing independent thinking.
D.S 0%
U.C. 0%
V.D.S. 0%
S 20%
V.S. 80%
6. The program is effective in developing written communication skills.
D.S 0%
V.D.S. 0%
U.C. 20%
V.S. 20%
S 60%
7. The program is effective in developing planning abilities.
D.S 0%
V.D.S. 0%
U.C. 0%
V.S. 20%
S 80%
8. The objectives of the program have been fully achieved
U.C. 0%
D.S 0%
V.D.S. 0%
S 20%
V.S. 80%

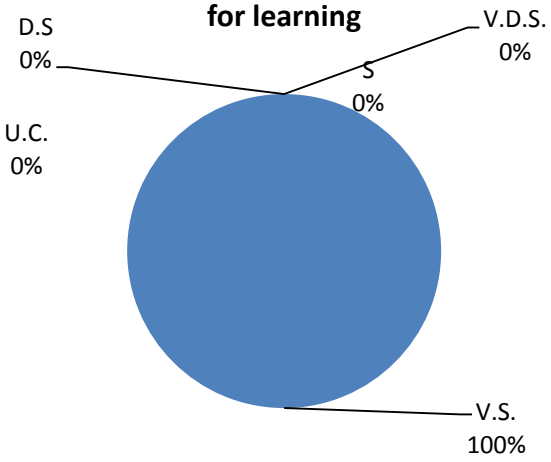
9. Whether the contents of curriculum ar e advanced and meet program objectives



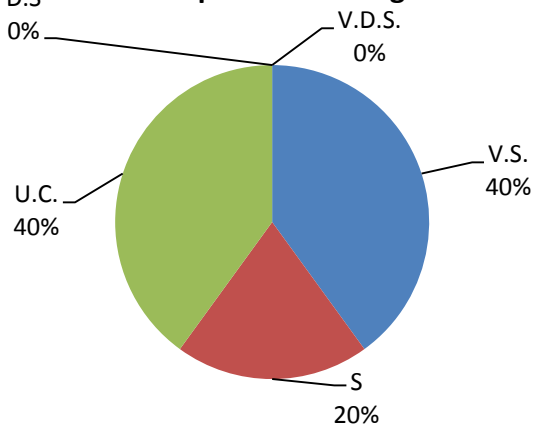
10. Faculty was able to meet the program objectives



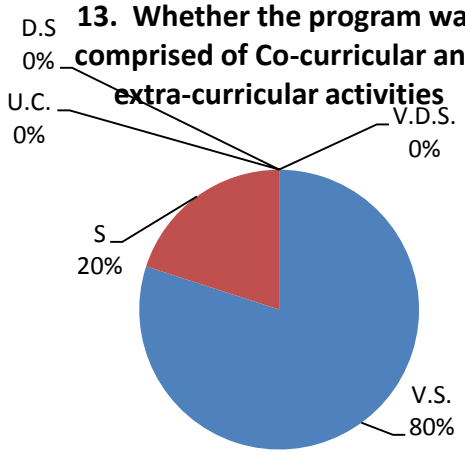
11. Environment was conducive for learning



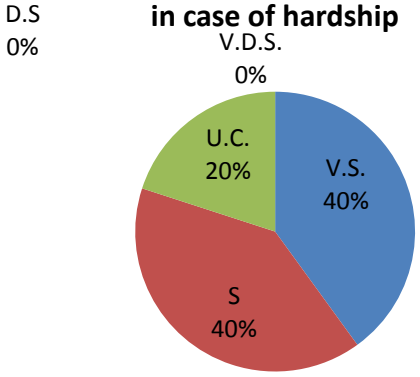
12. Whether the Infrastructure of the department was good.



13. Whether the program was comprised of Co-curricular and extra-curricular activities



14. Whether scholarships/ grants were available to students in case of hardship



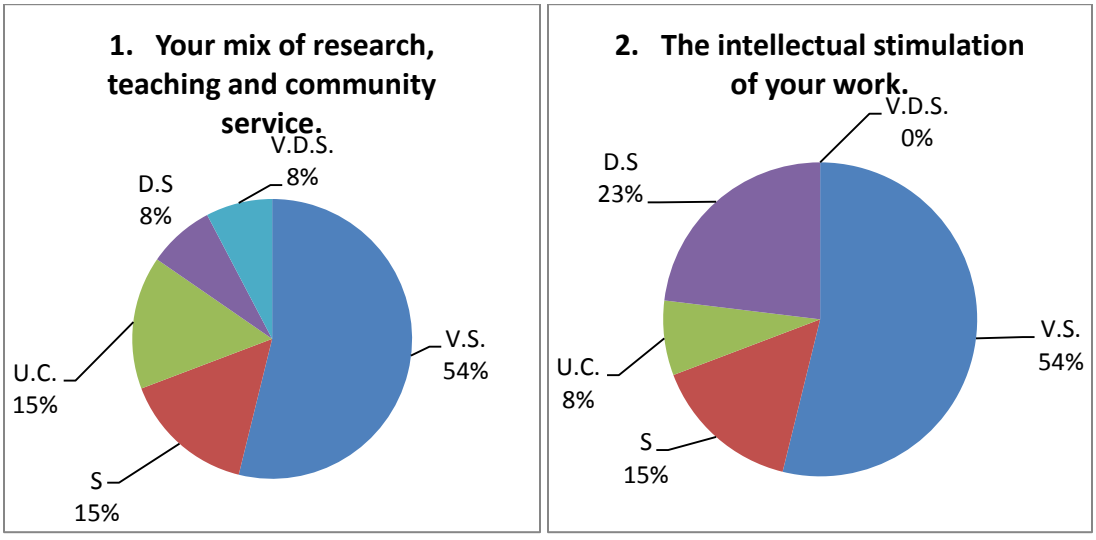
Performa 4: Research Student Progress Review Form

A total of 10 students of Ph.D. were surveyed. Most of the students are interested in laboratory work and eager to operate modern equipments. They pointed out the problems regarding the availability of space, computers and internet. In fact these facilities are very poor. Skills and capabilities reflected in performance as agronomist

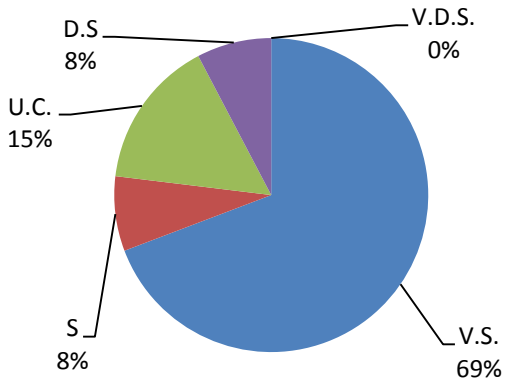
- Students will be able to work in the field of Agronomy with confidence.
- To develop abilities of effective writing, oral presentations and demonstration.
- To use modern techniques/ tools in research studies.

Performa 5: Results of Faculty Survey

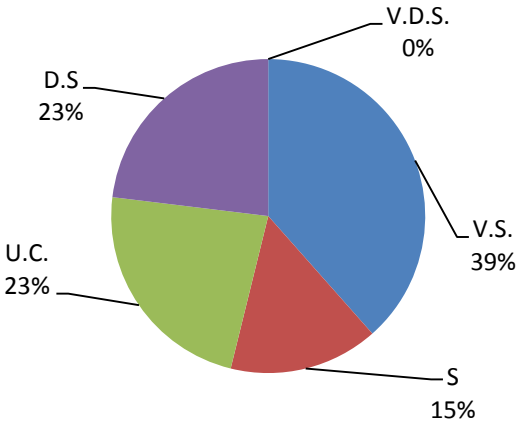
The data generated as a result of faculty survey, showed that 31% of faculty members were very satisfied , 23% satisfied, 23 uncertain, 15% dissatisfied and 8% very dissatisfied are satisfied with their job clarity about promotion process . However, most of the faculty themselves reported as very satisfied mentoring and administrative support, job security, support from the department, their progress through ranks. The least time availability to faculty to interact with their family is due to extra load on present teachers as some times of the faculty members proceed on training, workshops etc so the poor strength of remaining faculty in the campus has to bear out the load of course work and other assignments.



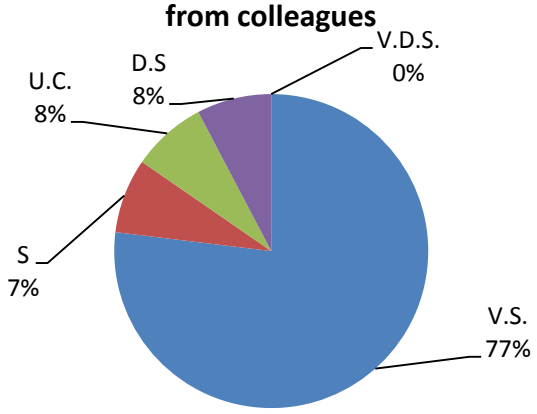
3. Type of teaching / research you currently do.



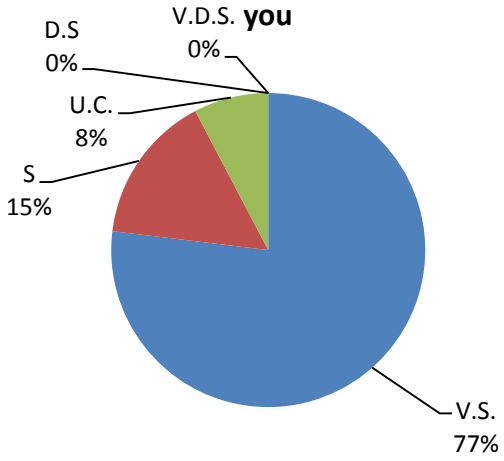
4. Your interaction with students



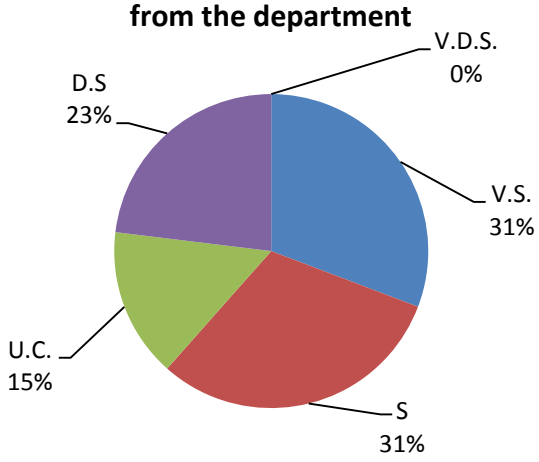
5. Cooperation you receive from colleagues



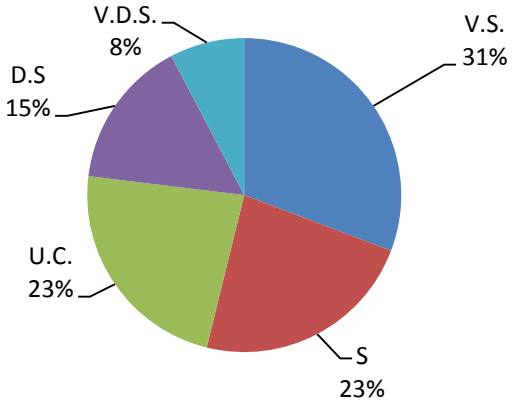
6. The mentoring available to you



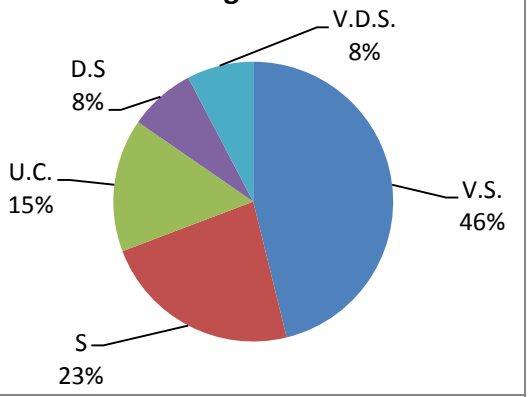
7. Administrative support from the department



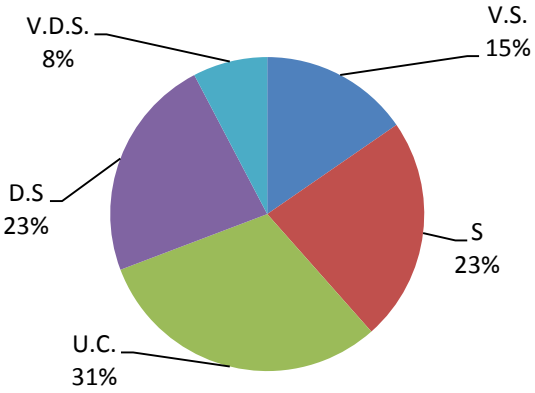
8. Providing clarity about the faculty promotion process



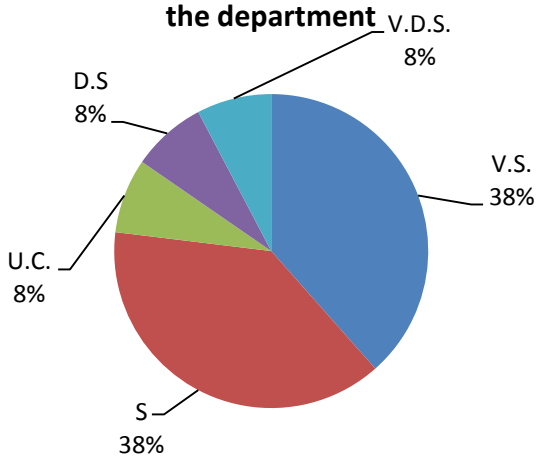
9. Your prospects for advancem ent and progress through ranks.



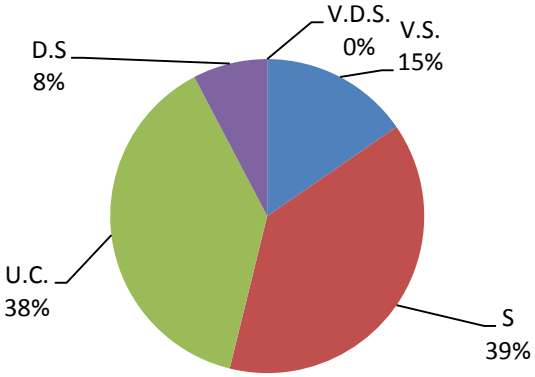
10. Salary and compensation package.



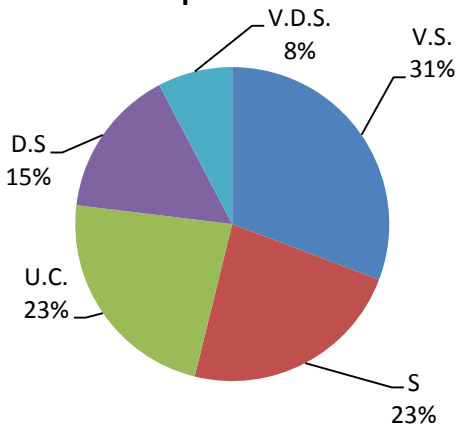
11. Job security and stability at the department



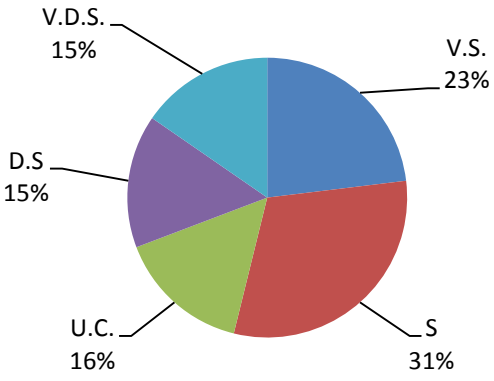
12. Amount of time you have for yourself and family.



13. The overall climate at the department.



14.The department is utilizing your experience and knowledge?



Proforma 6: Survey of department offering Ph.D. programs

Department of Agronomy started its Ph.D. program during 1998 and 4 students have completed Ph.D. from the department while 18 students are currently enrolled in department. Admission in Ph.D. requires M.Sc. (Hons.) Agronomy with a minimum CGPA of 3.0 along with thesis. Ph.D. scholar has to complete minimum 18 credit hours in addition to research thesis with minimum time duration of 3 years. Comprehensive examination is pre-requisite to qualify as candidate for Ph.D. degree and is taken at the end of course work. A research paper is must to publish from Ph.D. thesis in HEC recognize journal. Thesis is sent to two internationally good reputed scientists from academically advanced countries for evaluation. There are 09 permanent faculty members holding Ph.D. degree in the department out of them 06 are HEC approved supervisors. Faculty members are running 4 research projects in the department funded by different organizations. There are 4 Ph.D. scholars in the department holding HEC indigenous scholarships. Total research fund available to the department is 202,000 (for the reported two years) from all the resources.

Table 4: Survey of department offering Ph.D. programs

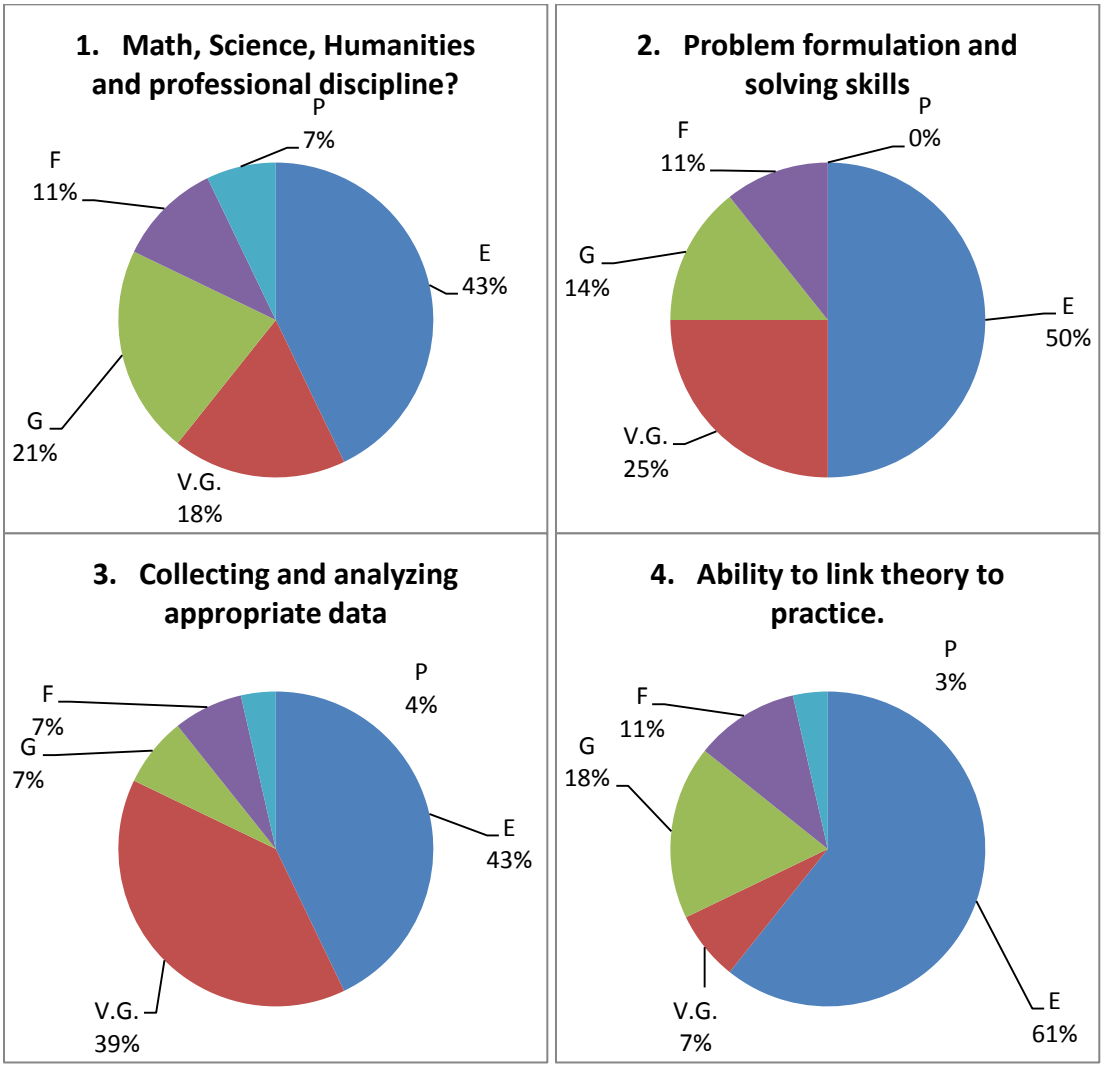
1. General Information:		
1.1	Name of Department	Agronomy
1.2	Name of Faculty	FC&FS
1.3	Date of initiation of Ph.D. program	00-00-1998
1.4	Total number of academic journals subscribed in area relevant to Ph.D. program.	Nil
1.5	Number of Computers available per Ph.D. student	Nil
1.6	Total Internet Bandwidth available to all the students in the Department.	Nil
2. Faculty Resources		
2.1	Number of faculty members holding Ph.D. degree in the department.	09
2.2	Number of HEC approved Ph.D. Advisors in the	06

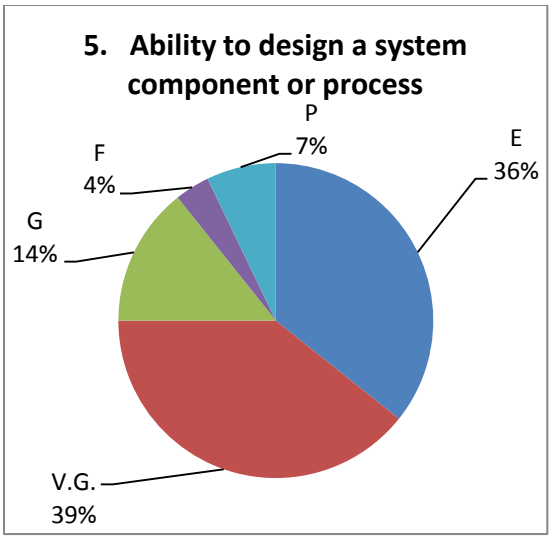
	department.	
3. Research Output:		
3.1	Total number of articles published last year in International Academic Journals that are authored by faculty members and students in the department.	05
3.2	Total number of articles published last year in Asian Academic Journals that are authored by faculty members and students in the department.	08
3.3	Total number of ongoing research projects in the department funded by different organizations	04
3.4	Number of post-graduate students in the department holding scholarships/fellowships.	04
3.5	Total Research Funds available to the Department	202,000 (2 years)
3.6	Number of active international linkages involving exchange of researchers/students/faculty etc.	Nil
4. Student Information:		
4.1	Number of Ph.D. degrees conferred to date to students from the Department during the past three academic years.	04
4.2	Number of Ph.D. students currently enrolled in the department	18
4.3	Ratio of number of students accepted to total number of applicants for Ph.D. Program.	3:5
5. Program Information		
5.1	Entrance requirements into Ph.D. Program	M. Sc. (Hons) Agronomy with a minimum CGPA of 3.0
5.2	Is your Ph.D. program based on research only? (Y/N)	Mini Credit Hours 18 + Thesis research
5.3	Maximum number of years in which a Ph.D. degree has to be completed after initial date of enrollment in Ph.D.	3 years

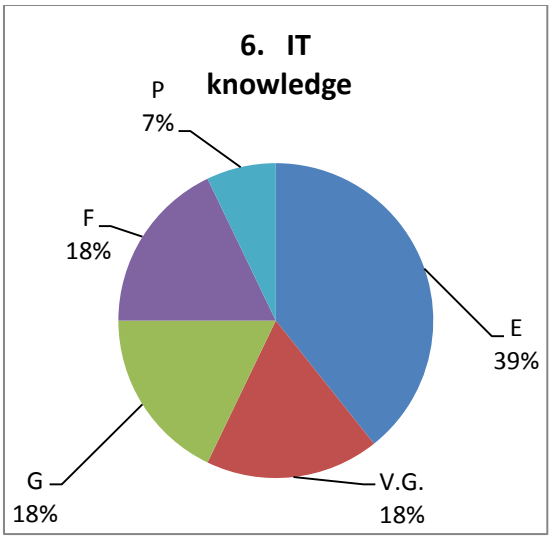
	program	
5.4	Total number of post M.Sc. (16 year equivalent) courses required for Ph.D.	Courses covering 18 Credit Hours (Mini)
5.5	Total number of M.Phil. level courses taught on average in a Term / Semester.	3-4
5.6	Total number of Ph.D. level courses taught on average in a Term / Semester.	2-3
5.7	Do your students have to take/write:	
Ph.D. Qualifying examination		Yes
Comprehensive examination		Yes
Research paper in HEC approved Journal		Yes (One)
Any other examination		No
5.8	Total number of International examiners to which the Ph.D. Dissertation is sent.	Two
5.9	How is the selection of an examiner from technologically advanced countries carried out?	Subject relevance/ recent status of research after getting consent of the examiner
5.10	Is there a minimum residency requirement (on campus) for award of Ph.D. degree?	Two years
6. Additional Information		
6.1	Any other information that you would like to provide.	No

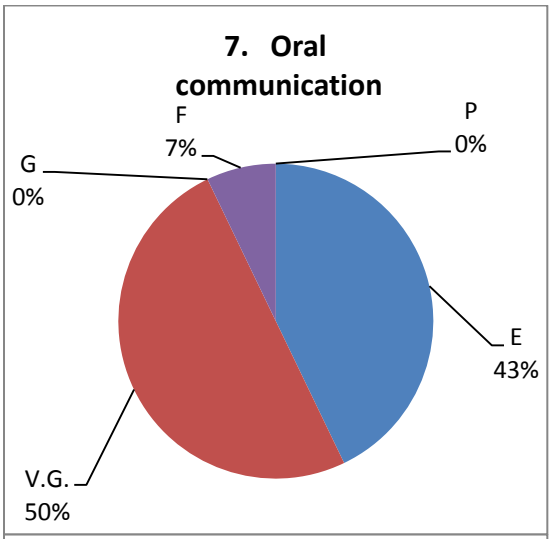
Proforma 7: Alumni Survey

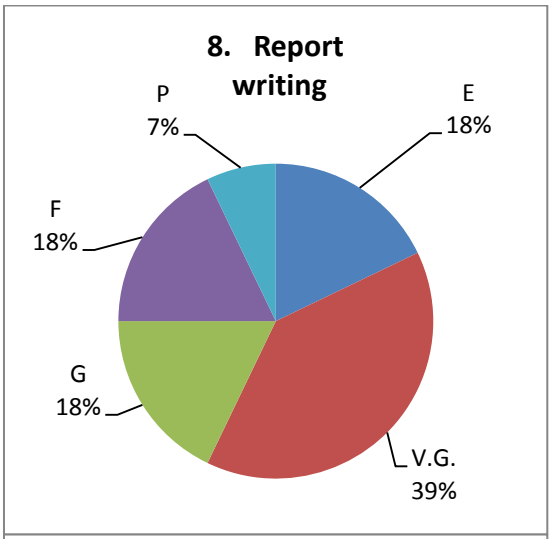
The purpose of this survey was to obtain alumni input on the quality of education and research they received and the level of preparation they had at University. A total of 09 alumni were surveyed. The data showed that the alumni reported 43% excellent, 18% very good, 21% good, 11% fair and 7% poor knowledge of Math, Science, Humanities and professional discipline. For other parameters, most of the Alumni reported excellent regarding department trained them excellently to formulate and solve problems and collect and analyze data, IT knowledge, training of oral communication, report writing and presentation skills, excellent interpersonal skills such as team work, working in challenging conditions and independent thinking, learnt excellent management of resource and time, learnt excellent power of judgment, department has excellent infrastructure and repute.

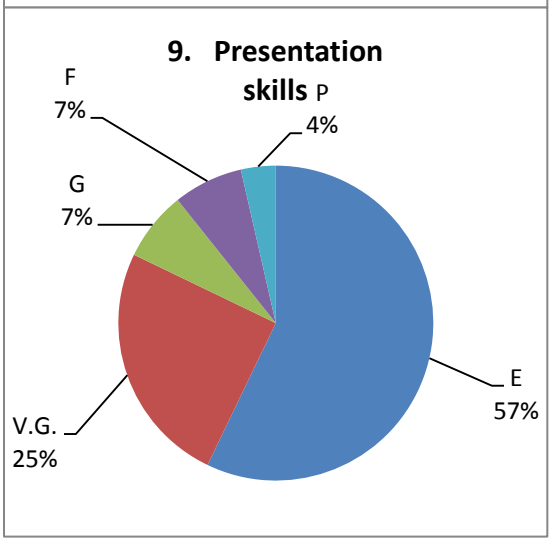


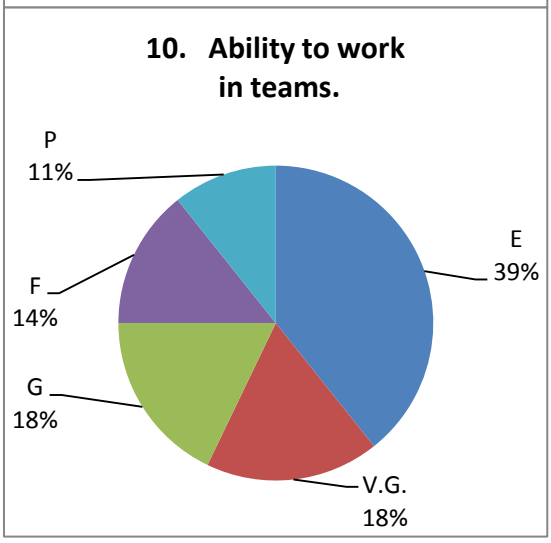

5. Ability to design a system component or process
P
7%
E
36%
F
4%
G
14%
V.G.
39%

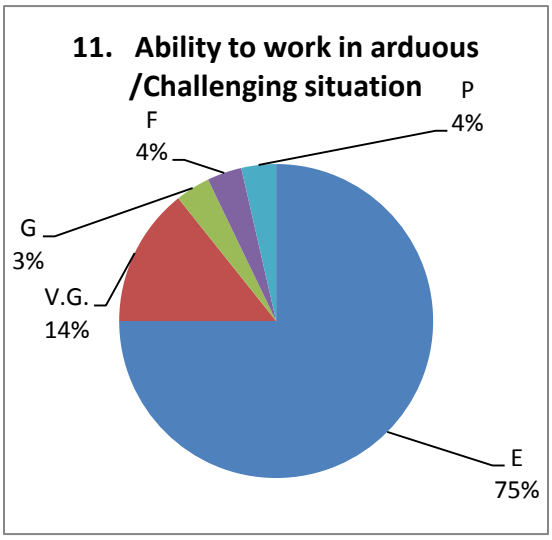

6. IT knowledge
P
7%
F
18%
E
39%
G
18%
V.G.
18%

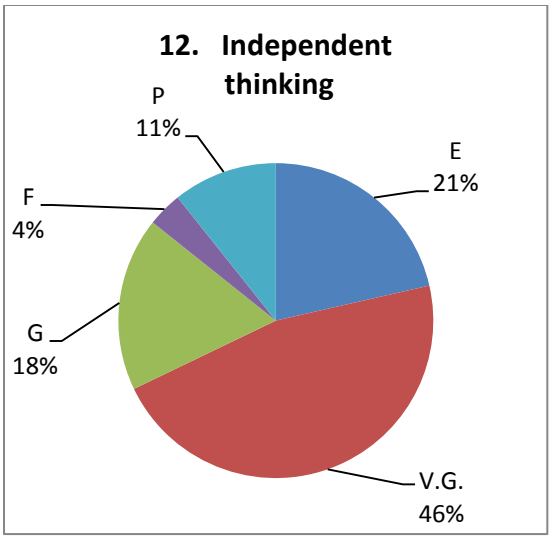

7. Oral communication
F
7%
P
0%
G
0%
E
43%
V.G.
50%

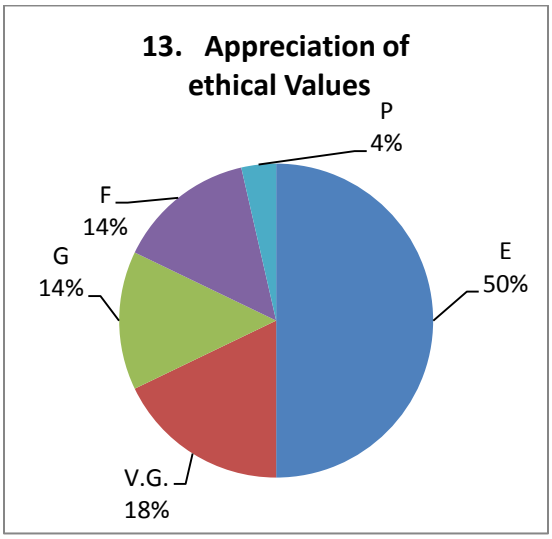

8. Report writing
P
7%
E
18%
F
18%
G
18%
V.G.
39%

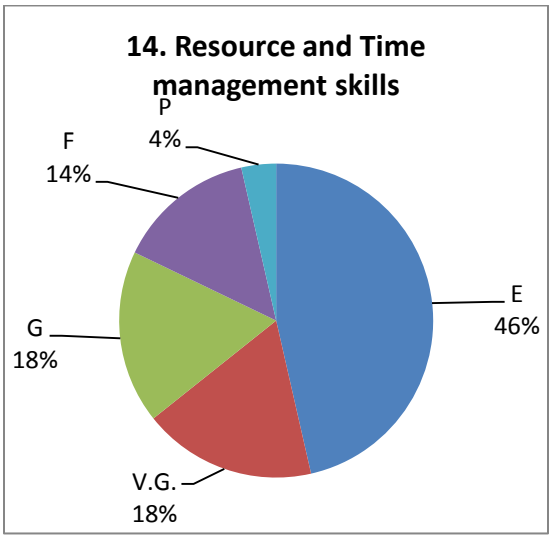

9. Presentation skills
F
7%
P
4%
G
7%
E
57%
V.G.
25%

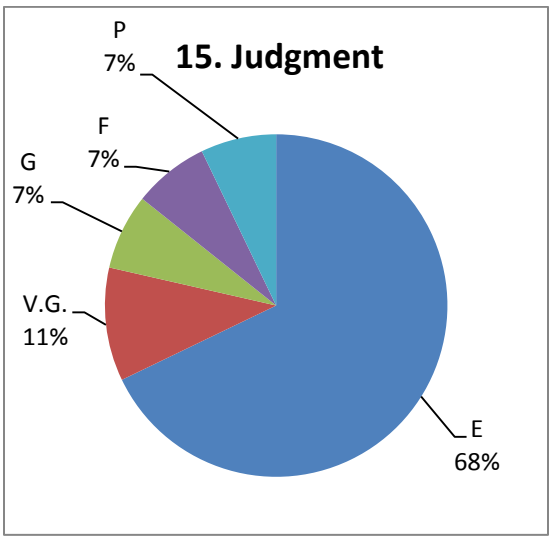

10. Ability to work in teams.
P
11%
E
39%
F
14%
G
18%
V.G.
18%

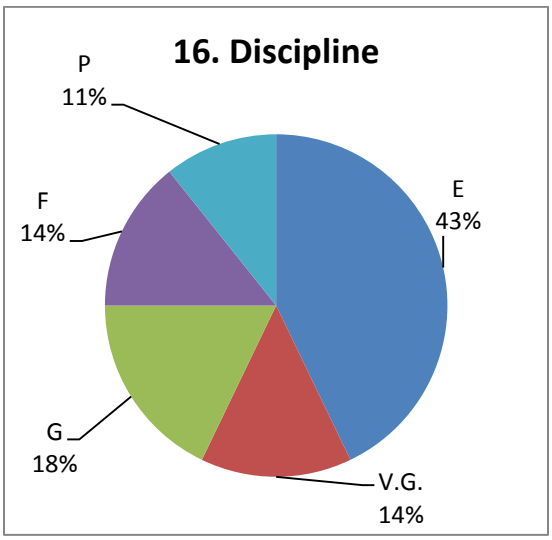

11. Ability to work in arduous /Challenging situation
P 4%
F 4%
G 3%
V.G. 14%
E 75%

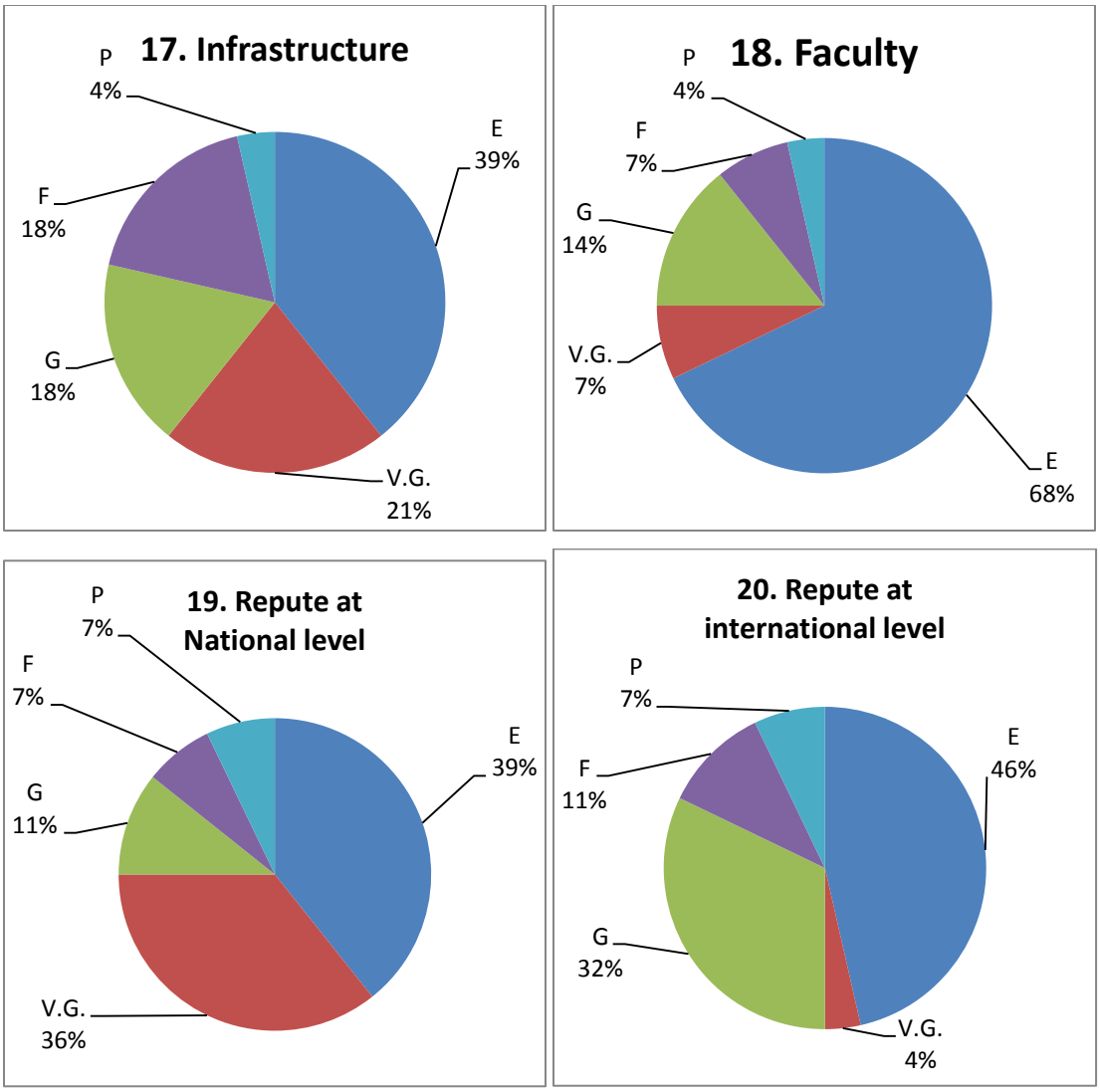

12. Independent thinking
P 11%
E 21%
F 4%
G 18%
V.G. 46%


13. Appreciation of ethical Values
P 4%
F 14%
G 14%
E 50%
V.G. 18%


14. Resource and Time management skills
P 4%
F 14%
E 46%
G 18%
V.G. 18%


15. Judgment
P 7%
F 7%
G 7%
V.G. 11%
E 68%

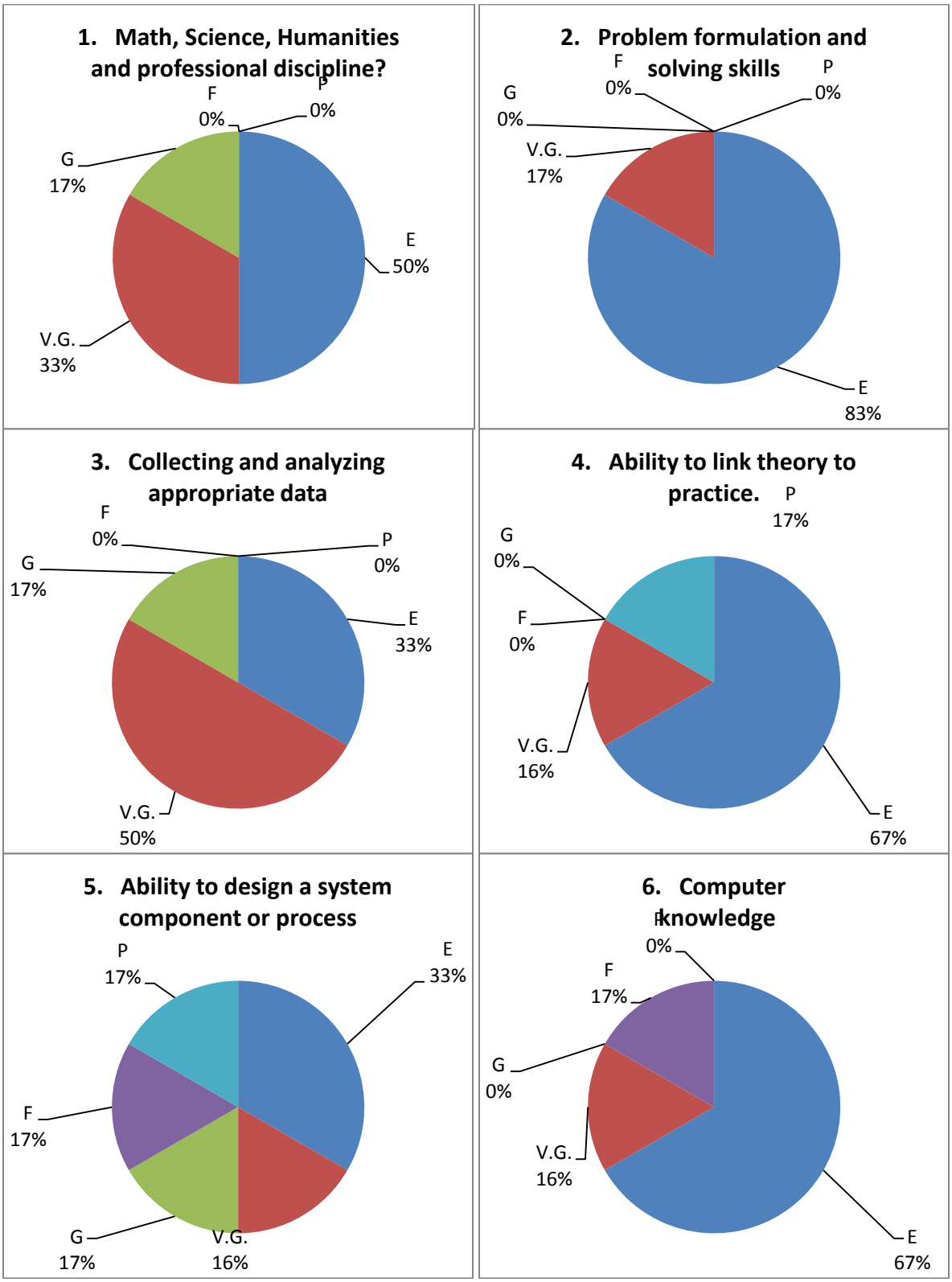

16. Discipline
P 11%
E 43%
F 14%
G 18%
V.G. 14%

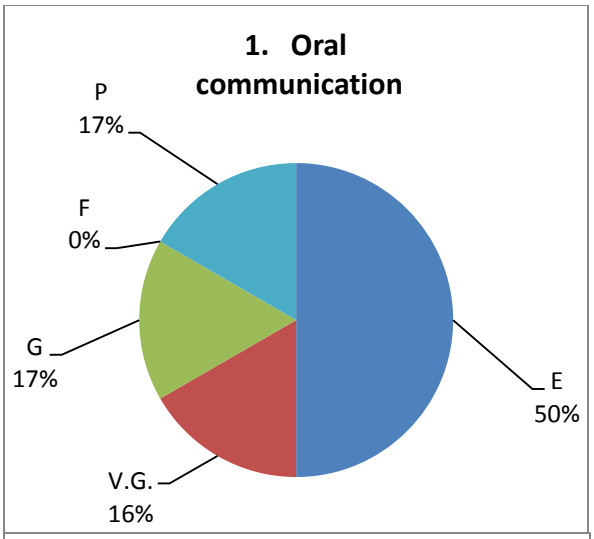


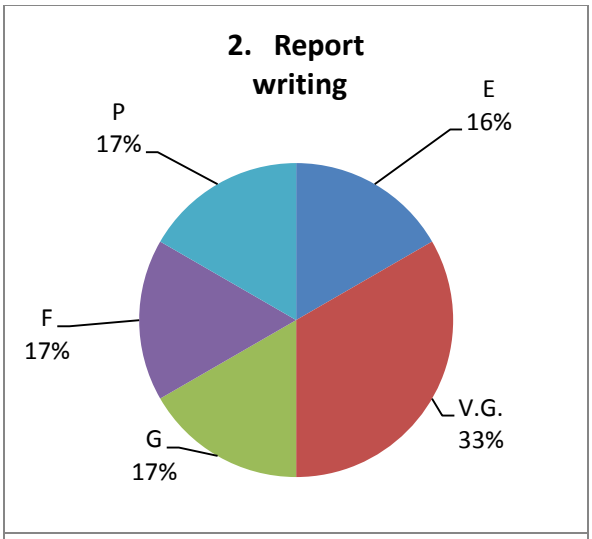
Proforma 8: Employer Survey

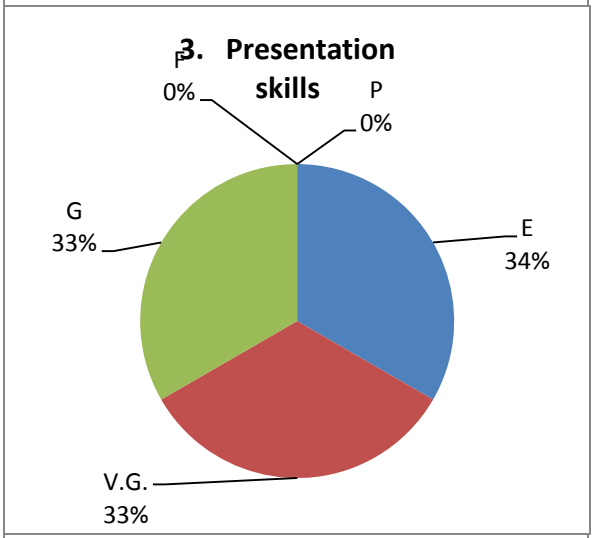
The purpose of this survey is to obtain employers input on the quality of education, the department is providing and to assess the quality of the academic program. The survey included University graduates employed in different organizations. A total of 6 employers provided the data. The generated data showed the report of the employers about the Math, Science, Humanities and professional discipline was as 50% excellent, 33% very good, 17% good, 0% fair and 0% poor. Most of the employers reported excellent performance of the candidates regarding different aspects of the professionalities like power of problem formulation and

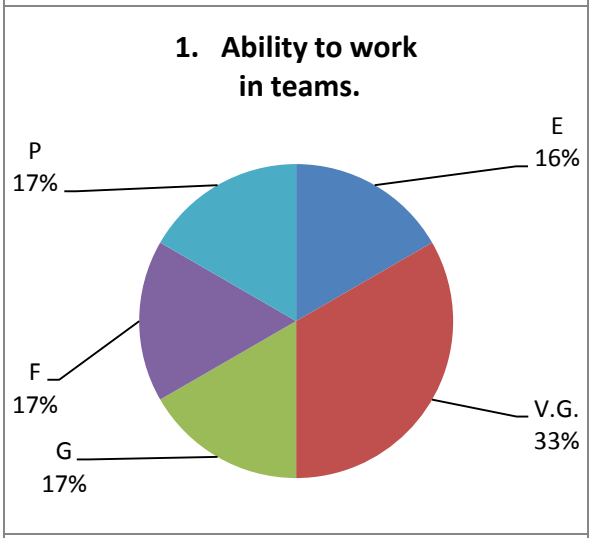
solving skills, and have great ability of oral communication and are reliable and ethically sound. Employers showed a little concern about computer skills of the candidate.

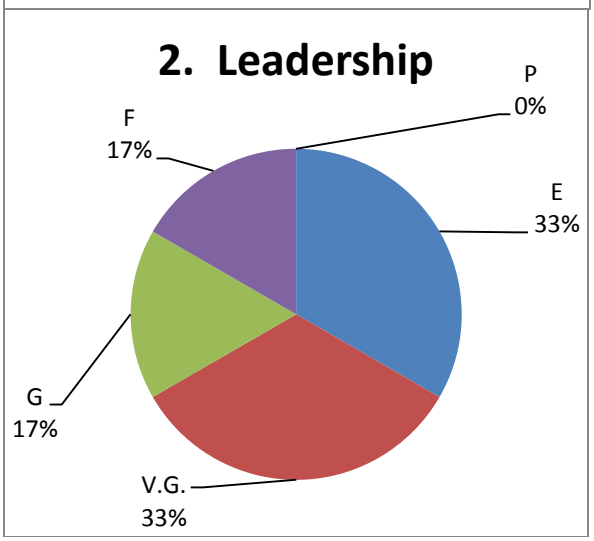


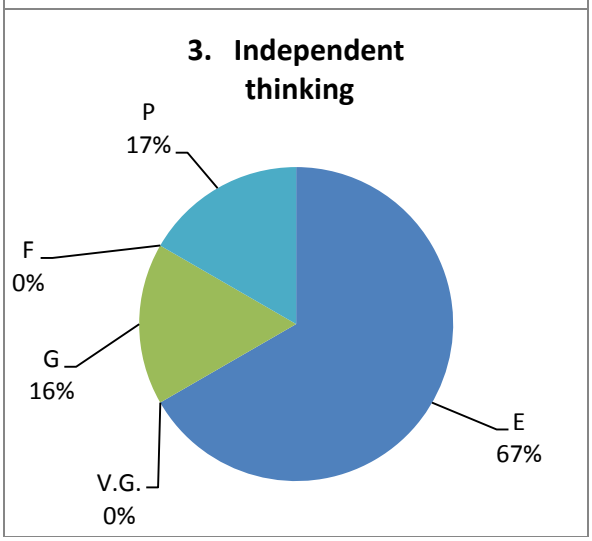

1. Oral communication
P 17%
F 0%
G 17%
E 50%
V.G. 16%

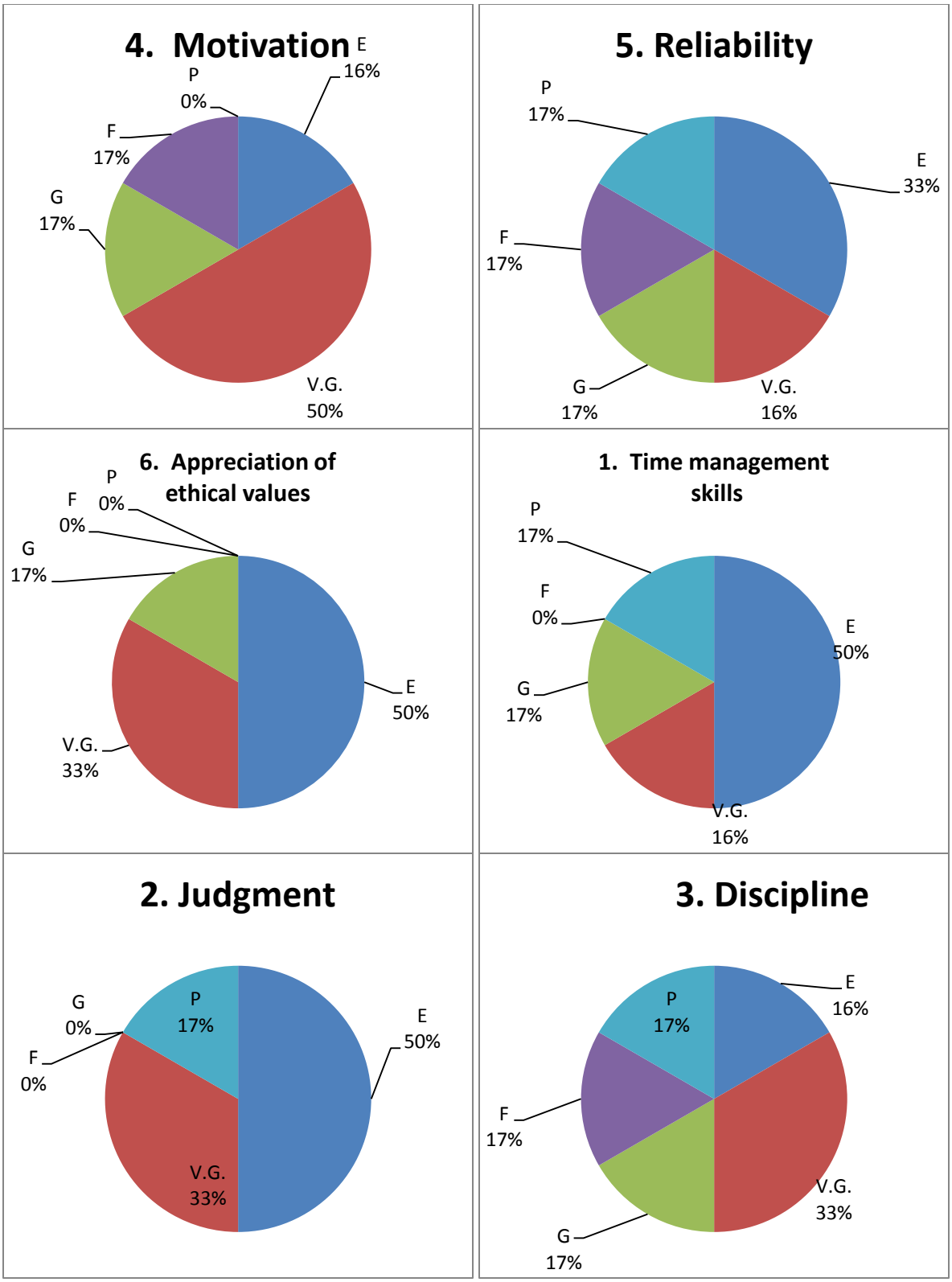

2. Report writing
P 17%
E 16%
F 17%
V.G. 33%
G 17%


3. Presentation skills
P 0%
P 0%
G 33%
E 34%
V.G. 33%


1. Ability to work in teams.
P 17%
E 16%
F 17%
V.G. 33%
G 17%


2. Leadership
P 0%
F 17%
E 33%
G 17%
V.G. 33%


3. Independent thinking
P 17%
F 0%
G 16%
E 67%
V.G. 0%


4. Motivation
E 16%
P 0%
F 17%
G 17%
V.G. 50%
5. Reliability
P 17%
E 33%
F 17%
G 17%
V.G. 16%
6. Appreciation of ethical values
P 0%
F 0%
G 17%
E 50%
V.G. 33%
1. Time management skills
P 17%
F 0%
E 50%
G 17%
V.G. 16%
2. Judgment
G 0%
P 17%
E 50%
F 0%
V.G. 33%
3. Discipline
E 16%
P 17%
F 17%
V.G. 33%
G 17%

Standard 1.3: Program's assessment results & documentation

The results of Program's assessment and the extent to which they are used to improve the program are documented.

Strength of the Department:

All the process of updation and improvement of department and program and corrective measures where needed takes place through proper channel from the Chairmen department to Dean Faculty and further to the competent Authority and vice virsa. The main strength of the department is the availability of highly qualified teachers and their full acquaintance with respective subjects. Majority of the faculty members are foreign qualified and are well versed in their area of interest.

Weaknesses identified in the program

Lack of infrastructure to transfer the recommended practices and technology to farmers. There is no arrangement for training the faculty for enhancing their professional competency so there is a need for short foreign trainings of young faculty members. The improvement feature for quality education in Agronomy department through There is lack of availability of the facility of audio visual aids and the latest equipements in the labs and abroad training of the faculty . Therefore, there is dire need for the overall enhancement of knowledge and skills of faculty members in relation to the latest global advancements in the discipline through exchange programs, short training and collaborative research project within and outside Pakistan.

Standard 1.4: Overall performance measures of the department

The department must assess its overall performance periodically using quantifiable measures. Performance of the faculty members pertaining to research activities indicates that there are 45 research papers and 6 projects in the credit of faculty members of the Agronomy department in the reporting period of this report. (Table 5).

Table 5: Present performance measures for research activities

Sr. Nos.	Name of faculty member	Research Papers	Projects Completed
1.	Dr. Muhammad Azim Malik	4	1(ALP)
2.	Dr. Muhammad Ashraf	5	--------
3.	Dr. Fayyaz-ul-Hassan	7	1 (PSF)
4.	Dr. Zammurad Iqbal Ahmad	4	------
5.	Dr.Abdul Razzaq	4	1(HEC)
6.	Mr. Irfan Aziz	2	--------
7.	Dr. Muhammad Ansar	5	1(PMAS-AAUR)
8.	Dr. Muhammad Rasheed	6	2(PMAS-AAUR)
9.	Mr. Ghulam Qadir	3	----------
11.	Mr. Mukhtar Ahmad	2	1 (PMAS-AAUR)
12.	Dr. Abdul Manuaf	2	----------
13.	Mr. Safdar Ali	1	----------
Total		45 international as well as national	6

Program out comes:

Table 6: Quantitative assessment of the department

Sr. #	Particular	Passed out	Currently Registered	Remarks
1.	Ph. D. Degrees awarded	11 (2 indigenous)	16 (4 indigenous)	Almost of the students joined /got jobs in public and private sector organizations.

The evaluation process indicated high efficiency of system and satisfactory impact of outcomes. Almost all the graduates' students got jobs in various organizations viz provincial agricultural department, universities, research organizations, banks and private firms.

Skills and capabilities reflected in performance as Agronomy:

Students develop ability to apply knowledge of Agronomy and to work as professionals to build confidence and communicate effectively in writing and oral skills. Students are able to demonstrate use modern research tools, techniques and skills for building their professional career. To make them understand how to formulate and design the experiments and to work effectively in a research group.

Faculty satisfaction regarding the administrative services:

- The department upholds a percentage 4:1 for the academic (technical) and administrative non-technical staff which fulfils the standard set by HEC.
- Administrative meeting (departmental, university, academic council and syndicates) are attended as and when required.
- Quick office disposal are never delayed, so for no complaint in this regard, received from authorities

Proper records of the following are maintained:

- Research Reports
- Entry test
- Assignments

- Attendance report
- Evaluation report
- Enrolment

Major future improvement plans

- Establishment of Crop Seed Production ,Research and Training Centre
- Execution of research projects funded by different donor agencies.
- Further Strengthening of Linkages with National/ International organizations. Farmers field days, Participatory research activities. Establishment of demonstration plots on farmers fields.
- Arranging faculty trainings in advanced countries to equip them with latest developments and research skills.

CRITERION 2:
CURRICULUM DESIGN AND ORGANIZATION

Curriculum design and update is initiated by the faculty members of the Department after the approval of Board of Studies which comprises of senior faculty members and subject specialist who is taken from other faculties or from other Universities or research Institutions. It is headed by the Chairman of the Department. The approved curriculum is then sent to Board of Faculty, headed by the Dean Faculty of Crop and Food Sciences. This Board consists of senior faculty members from all the Departments of the faculty and subject specialists. Finally the curriculum is presented before the Academic Council which is comprised of the Professors, Associate Professors, Faculty Representatives and nominated experts.

Definition of Credit Hour:

A student must complete a definite number of credit hours. One credit hour is one theory lecture or two hours practical work per week. One credit hour carries 20 marks. The semester is of 18 weeks.

Pre-Requisites

Admission Requirements:

Degree	**Pre-requisites**
Ph.D.	M.Sc. (Hons.) with minimum CGPA 3.0/Ist division + interview and entry test

Degree Plan

Ph.D. in Agronomy

The PhD degree program was first time introduced in the PMAS-Arid Agriculture University Rawalpindi, department of Agronomy in 1998. The program designed for quality research is completely coherent with HEC standards. The Ph.D. study Program consists of 3 academic years / 6 semesters. As per HEC rule, a student has to complete 18 credit hours for course work. Degrees are awarded after completion of 18 credit hours course work, two year research work and thesis writing are mandatory for the Ph.D. degree. Thesis is sent to technologically developed countries for recommendation from the foreign examiners for final approval of thesis.

Degree Requirements:

The program contents meet the program objectives as highlighted and provided by the Pakistan Higher Education Commission. Minimum 18 credits of course work is compulsory; out of which 9 credits are of core/compulsory courses. Course work following a synopsis defense, seminar, comprehensive exam and submission of thesis to be approved by the University and

examined by two foreign internationally recognized scientists from the University of technologically advanced countries.

Degree	Requirements (Minimum)
Ph.D.	Academic minimum attain of 3.0 CGPA, 18 credit hours compulsory, Comprehensive examination (Written and Oral) and thesis examination.

Examination Weightage:

In course work, student's evaluation is done by mid-term examination, assignments/presentations/quizzes and final examination. A student, who misses the mid-term examination, is not allowed to sit in the final examination and is awarded zero marks in that examination. In case a student does not appear in the final examination of a course, he shall be deemed to have failed in that course. In theory, weightage to each component of examination is as ascribed her under:

Mid Examination	30%
Assignments	10%
Final Examination	60%

For practical examination 100% weightage is given to practical as scored in the final examination. A student is eligible to sit for the examination provided that he/she has attended not less than 75% of the classes in theory and practical, separately.

Eligibility for examination:

A student is eligible to sit for the examination provided that he/she has attended not less than 75 % of the classes in theory and practical, separately. The minimum pass marks for each course are 65%.

Scheme of studies and course contents of Ph.D. Agronomy:

Scheme of studies for Ph.D. Agronomy is given below. List of Courses offered by the Department is given in Annexure-1

Summary of Curricula courses requirements for Ph. D. Agronomy degree.

Table 7: List of courses

S. No	Course No.	Title	Credit Hours
11.	AGRO-710	Crop Nutrition	3(3-0)
12.	AGRO-712	Plant water relations	3(2-2)
17.	AGRO-717	Integrated agriculture	3(3-0)
19.	AGRO-720-I	Seminar	1(1-0)
20.	AGRO-720-II	Seminar	1(1-0)

Compulsory courses for Ph.D. are

- Statistics
- Bio-chemistry
- Integrated Agriculture

Table 8: Program's Courses VS outcomes

Courses	Outcomes					
	1	2	3	4	5	6
AGR-710,AGR-712,AGR-717	++	++	+++	+++	+++	++

\+ = moderately satisfactory

++ = Satisfactory

+++ = Highly satisfactory

Standard 2.1: Assessment of the Curriculum of Agronomy Department

Table 9: Assessment of curriculum

Courses	Objectives		
	HRD	Research oriented	Integrated
Ph. D. Agronomy	Highly satisfactory	Satisfactory	satisfactory

The Curriculum fits very well and satisfies the core requirements for the program, as specified by the respective accreditation body. The Curriculum satisfied the general arts and professional and other discipline required for the program according to demands and requirements set by the Higher Education Commission (HEC).

A student is eligible to sit for the examination provided that he/she has attended not less than 75% of the classes in theory and practical, separately. The minimum pass marks for each course are 65% for Ph.D.

Standard 2.2:

Theoretical backgrounds, problem analysis and solution design must be stressed within the program's core material.

Table 10: Elements vs. courses:

Elements	**Agronomy Courses**
Theoretical background	AGR-710,AGR-712,AGR-717
Problem analysis/ Solution Design	There are courses like Stat-711 (Advanced exptal. design with data processing)

Standard 2.3: Credit hours distribution

Table 11: Credit hours distribution

Credit Hours					
Degrees	Minimum Course hours	Thesis	Duration in semesters		Passing CGPA
			Min.	Max.	
Ph.D.	18	-	8	10	3.00

Standard 2.4: Credit hours and HEC requirement

The courses offered by the department meet the minimum criteria as laid down by Higher Education Commission.

Standard 2.5: Attendance requirement

Attendance required in each course is 75%, below which the student is not allowed to sit in the examination.

Standard 2.6: Information technology component of the curriculum

Information technology component of the curriculum must be integrated throughout the program. There is deficiency of information technology related courses but some activities and courses in program are useful to give basic training of computer use. Department also lacks IT facilities like computers etc.

Standard 2.7: Enhancing oral and written communication skills of the students

There are two courses of seminars (one credit hour each) compulsory for each Ph.D. student which he has to present in the seminar room thus enhancing his communication skills. Moreover, the students also present their Doctorate research plan before the audience

Assignments are given to students on specific titles (part of the course) which are presented by them orally and submitted as written report, which not only increase capacity but oral and written communication skills of the students.

CRITERION 3
LABORATORIES AND COMPUTER FACILITIES

Laboratory title: There are 4 labs in the department designated for specific purposes

- Allelopathy Research lab
- General research lab
- Stress physiology lab
- Nutrient efficacy lab

Location and Area:

Faculty of crop and food sciences, ground floor, Agronomy department

Objectives

Laboratories are used for:

- Practical exercise and demonstrations to students in their introductory and major courses
- Research work for the Post-graduate students
- Used for implementing the funded projects by the University, HEC, PSF, PARC and other agencies.
- Laboratories are well spacious and adequate. In view of the equipment available research work being done and future expansion programs, laboratories do not meet our requirements.
- Major apparatus viz equipments: following major equipments are available but some are out dated and out of order.

List of equipments and instruments in department:

S. No.	Name of Equipment	Quantity/No.
1.	Heating Drying Cabinet	03
2.	Water Distillery apparatus	01
3.	Over Head Projector	02

4.	Computer with Laser Printer	02
5.	Freezer	01
6.	pH Meter	01
7.	EC Meter	01
8.	Centrifuge 14000 Rpm	01
9.	Top Loading Balance	02
10.	Vacuum Pump	01
11.	Water Potential Apparatus	01
12.	Water Bath	01
13.	Spectrophotometer	01
14.	Leaf Area Meter	02
15.	Growth Chamber	02
16.	Flame Photometer	01
17.	Analytical Balance	02
18.	Osmometer	01
19.	Chiller	01
20.	Digestion Block	01
21.	Mechanical shaker	01

Shortcoming in Laboratory facilities for faculty member and Ph.D. students.

- Equipments regards growth analysis/physiological parameters are lacking e.g. IRGA, chlorophyll meter etc, moisture monitoring, Neutron probe, tensiometers, etc water potential measurement devices.
- The department lacks lecture rooms. Currently research laboratories are being used for classes.
- A green/glass house is direly needed for controlled experiments.
- There is no proper safety arrangement and no security plans are in the case of emergency. There is no emergency exit for the lab and classroom.
- No fire extinguishers have been installed in any laboratory.
- No first aid kits/ facilities provided in the laboratory/department.

Standard 3.1: Laboratory manuals/documentation/instructions for experiments

- Laboratory manuals/documentation/instructions for experiments must be available and readily accessible to faculty and students
- Laboratory manuals of each subject are not available.
- The department has no library at all.
- However, individual teachers have their books.

Standard 3.2: Support/Laboratory Personal for Maintenance of Laboratory

Laboratories are maintained by Lab Assistant (01), and Laboratory Attendants (02).

Standard 3.3: Computer and infrastructure facilities

Computer facilities are not available to all faculty members and the Ph.D. students whereas infrastructure for the academic purpose does not support the conduciveness of the teaching environment.

CRITERION 4: STUDENT SUPPORT AND ADVISING

Our university organizes support programs and provides information regarding admission, scholarship schemes, etc. Department in its own capacity arranges orientation and guides various cultural activities and solve the student's problems, however currently there is no parent teacher association.

Standard 4.1: Frequency of courses

- Courses are taught as per policy of HEC.
- At undergraduate and postgraduate level course subjects are offered as per scheme of study provided by HEC and approved.
- Courses are offered according to scheme of study.
- Elective courses are offered as per strategy of HEC and the university.

- For postgraduate Programs, a variety of courses are offered according to demand of the profession.

Standard 4.2: Structure of the courses

- To ensure effective interaction between students, faculty and teaching assistants at the time of course formulation both theoretical and practical aspects are focused.
- Theoretical problems are explained and assignment is also given to the students whereas practical are carried out both in the laboratory and in the field
- Courses are structured and decided in the board of study meetings.
- Emphasis is always given for an effective interaction between each section.

Standard 4.3: Guidance to the Students

Several steps have been taken to provide guidance to the students such as:

- Students are informed about the program requirement through the office of the head of the department.
- Through the personal communication of the teachers with the students.
- Students can also consult their relevant teachers whenever they face any professional problems.
- In case of some problems, Director, Student Affairs is available who is ready to help the students. Senior tutor has been entrusted with tutorial, counseling and for extracurricular activities.
- Student can interact with the teachers in university, whenever they need.
- Realizing the need for exploring job opportunities for the university graduates, Directorate of placement bureau has been established at PMAS-AAUR.

CRITERION 5: PROCESS CONTROL

It includes student admission, registration, faculty recruitment activities which are dealt by various statutory bodies and the university administration.

Standard 5.1: Program admission criteria

The process of admission well established and followed as per rules and criteria set by HEC. For this purpose an advertisement is given in the National Newspapers by the Registrar office.

Table 12: Admission requirements

Degree	Pre-requisites
Ph.D.	M.Sc. (Hons.) with minimum CGPA 3.0/Ist division + interview and entry test

Standard 5.2: Process of registration

- The student name, after completion of the admission process, are forwarded to the registrar office for proper registration in the specific program and registration numbers are issued to the students
- Students are evaluated through Mid, Final and Practical exams and through assignments.
- Registration is done for one time for each degree but evaluation is done through the result of each semester, if the students fulfill criteria of the university, they are promoted to the next semester.
- In general, the students are registered on merit basis keeping in view the academic and research standards.

Standards 5.3: Recruiting process for faculty

- Recruitment policy followed the university is recommended by HEC for induction of new faculty is done as per rules:
- Vacant and newly created positions are advertised in the National Newspapers, applications are received by the registrar office and call letters are issued to the short listed candidates on the basis of their experiences, qualifications, publications and other qualities / activities as fixed by the university.

- The candidates are interviewed by the university selection Board. Principal and alternate candidate are selected.
- Selection of candidates is approved by the syndicate for issuing orders to join within a specified period.
- Induction of new candidates depends upon the number of sanction posts.
- Standard set by HEC are followed.
- At present, no procedure exists for retaining highly qualified faculty members, however, the revised pay scales of structures is quite attractive.
- HEC also supports appointment of highly qualified members as foreign faculty professors, National Professors and place them in various departments of the university.

Standard 5.4: Teaching and delivery of course material

- To help providing high quality teaching, Department periodically revises the curriculum depending upon requirements, innovations and new technology
- With the emergence of new fields, new courses are set and included in the curriculum
- Lecture notes are also prepared by the teachers and given the students.
- Most of the lectures are also supplemented by overheads, slides, pictures.
- All-out efforts are made that the courses and knowledge imparted should meet the objectives and outcomes. The progress is regularly reviewed in the staff meetings.

Standard 5.5: Completion of Program Requirements

The controller of examinations announces the date of commencement of examination. After ~20-30 days of the examinations, the controller office notifies the results of the students. The evaluation procedure consists of mid and final examinations, practical formulas, assignments and reports, oral and technical presentations. Candidates who secure 80% or more marks are awarded grade A. Gold medals are awarded to the students who secure highest marks. Degrees are awarded to the students on the annual convocation that is held every year.

Examination Weightage:

Grading Policy

A grade = 80 % and above

B grade = 65-79 %

C grade = 50-64 %

D grade = 40-49 %

F grade = below 40 %

CRITERION 6: FACULTY

Standard 6.1: Full Time Faculty

There must be enough full time faculty who are committed to the program to provide adequate coverage of the program areas/courses with continuity and stability. The interests and qualifications of all faculty members must be sufficient to teach all courses, plan, modify and update courses and curricula. All faculty members must have a level of competence that would normally be obtained through gradual work in the discipline. The majority of the faculty must hold a Ph.D. in the discipline

Table 13: Full Time Faculty

Program area of specialization	**Number of faculty members in each area**	**Number of faculty with Ph.D. degree**	**Names of the Faculty Members**
Integrated Weed Management, Zero-Tillage, Allelopathy	02	02	Dr. Muhammad Azim Malik, Dr. Muhammad Ashraf
Oilseed Crops, Crop Water	03	03	Dr. Fayyaz-ul-Hassan,

Management			Dr. Ghulam Qadir Dr. Abdul Manaf
Integrated Plant Nutrient Management, Drought stress physiology, NRM & GIS	03	02	Dr. Zammurad Iqbal Ahmed, Dr. Muhammad Rasheed Mr. Irfan Aziz
Stress Physiology, Genetic Transformation of Crops.	01	01	Dr. Abdul Razzaq
Fodder & Forage Production	02	01	Dr. Muhammad Ansar Mr. Safdar Ali
Plant Physiology, Crop Growth Modeling and climate change	02	00	Mr. Naveed Tahir Mr. Mukhtar Ahmed

Standard 6.2:

All faculty members must remain current in the discipline and sufficient time must be provided for scholarly activities and professional development. Also, effective programs for faculty development must be in place.

Table 14: Faculty qualification

Sr .#	**Name of faculty member**	**Designation**	**Qualification**	**Name of Country Awarding Highest Degree**	**Date of Birth**	**Email address**
1.	Dr. Muhammad Azim Malik	Professor	Ph.D.	USA	20-06-1955	drazim61@gmail.com
2.	Dr. Muhammad Ashraf	Professor	Ph.D.	USA	01-09-1952	muhammad.ashraf@uaar.edu.pk drashraf_150@yahoo.com

3.	Dr. Fayyaz-ul-Hassan Sahi	Professor	Ph.D.	UK	15-05-1963	fayyaz.sahi@uaar.edu.pk
4.	Dr. Zammurad Iqbal Ahmed	Associate Professor	Ph.D.	PK	01-05-1960	azammurad@htomail.com
5.	Dr. Abdul Razzaq	Associate Professor	Ph.D.	China	01-08-1957	abdul.razzaq@uaar.edu.pk
6.	Mr. Irfan Aziz	Assistant Professor	M.Sc.(Hons.)	PK		dIrfan.aziz@uaar.edu.pk
7.	Dr. Muhammad Ansar	Assistant Professor	Ph.D.	UK	14-10-1964	Muhammad.ansar@uaar.edu.pk drmatarar@gmail.com
8.	Dr. Muhammad Rasheed	Assistant Professor	Ph.D.	PK	09-10-1962	drrasheed786@gmail.com rasheed786@uaar.edu.pk
9.	Dr. Ghulam Qadir	Assistant Professor	Ph.D.	PK	01-12-1968	Qadir@uaar.edu.pk
10.	Mr. Mukhtar Ahmed	Lecturer	M. Sc. (Hons.)	PK	01-10-1979	mukhtarahmad@uaar.edu.pk
11.	Dr. Abdul Manaf	Lecturer	Ph.D.	PK	20-02-1970	munafawan@yahoo.com
12.	Mr. Safdar Ali	Lecturer	M. Sc. (Hons.)	PK	01-10-1974	safdaraliarid@yahoo.com

Standard 6.2: Effective programs for faculty development

- Professional training and availability of adequate research and academic facilities are provided to the faculty members according to the available resources.
- Currently one faculty member is abroad for post-Doc as sponsored by the HEC.
- Incentives in the form of allowances to theses supervisors have been implemented lately to promote high standard research.
- Existing facilities include mainly internet access, which is available through networking system in addition to library facility with latest books also available.
- Effective programs for faculty development have been introduced.

Standard 6.3: Faculty member motivation

Time to time provision of enthusiasm to the young faculty by the senior faculty members(Table 15).

Parameter	Dr. Muhammad Azim Malik	Dr. Muhammad Ashraf	Dr. Fayyaz-ul-Hassan Sahi	Dr. Zammurad Iqbal Ahmed	Dr. Abdul Razzaq	Mr. Irfan Aziz	Dr. Muhammad Ansar	Dr. Muhammad Rasheed	Dr. Ghulam Qadir	Dr. Mukhtar Ahmed	Dr. Abdul Manaf	Mr. Safdar Ali
Your mix of research, teaching and community service	A	B	A	A	A	A	A	B	A	B	A	B
The intellectual stimulation of your work B	B	A	A	B	A	A	A	B	A	A	A	B
Type of teaching/research you currently do	A	B	B	A	A	A	A	B	B	A	A	B

Your interaction with students	A	A	A	A	B	A		B	A	B	B	A
Cooperation you received from colleagues	A	B	A	B	B	A	A	B	B	A	A	B
The mentoring available to you	A	A	A	B	A	A	B	A	A	A	A	B
Administrative support from the department		A	B	B	A	A	B	B	A	B	B	A
Providing clarity about the faculty promotion process	B	A	A	B	A	B	A	A	B	A	A	B
Your prospects for advancement and progress through	A	B	A	B	B	B	A	B	B	A	A	B

ranks												
Salary and compensation packages	B	B	B	B	B	A	A	B	A	A	B	A
Job security and stability at the department	B	A	B	A	A	B	A	A		B	A	B
Amount of time you have for yourself and family	A	B	A		B	B	B	A	A	B	A	B
The overall climate at the department	B	B	A	A	B	B	A	A	B	A	A	A
Whether the department is utilizing your experience and	B	A	A	B	A	A	B	B	A	A	B	B

knowledge												
What are the best programs/ factor currently available in your department that enhances your motivation and job satisfaction?		Cooperative attitude of staff and the students	Friendly working environment	Favorable academic/ Research and writing environment.	Good interaction between teachers and students and among teachers		Up gradation has good effect on job satisfaction	Sound climate for working And research		Best coordination among the Faculty members	Cooperative atmosphere	

Suggest programs/factors that could improve your motivation and job satisfaction			Further facilitation In provision of research /practical facilities as well as space	Establishment of research groups and interdepartmental collaboration based on areaof research may bestrengthened		Availability of modem approaches in Agronomy		Development of laboratories for research work		Lab. Conditions should be improved	Self contentment	

A= Very Satisfied; B= Satisfied; C= Uncertain; D= Dissatisfied; E= Very Dissatisfied

List of publications during the reporting period

1. **Prof. Dr. Muhammad Ashraf**

a. Aziz, I., M. Ashraf., T. Mahmood and K.R. Islam. 2010. Crop Rotation Impact On Soil Quality. Pak. J. Bot., 43(2): 949-960.

2. **Prof. Dr. Fayyaz-ul-Hassan**

a. Shuaib Kaleem[1], Fayyaz- ul- Hassan[1], Abdul Razzaq[1], Abdul Manaf and Aamir Saleem. 2010: Growth rhythms in sunflower (Helianthus annuus L.) in response to environmental disparity. African J. of Biotechnology. 9(15); 2242-2251.

b. Aamir Saleem , Fayyaz-ul-Hassan, A. Manaf and M. S. Ahmedani. 2009, Germination of Themeda triandra (Kangaroo grass) as affected by different environmental conditions and storage periods. African J. of Biotechnology. 8(17); 4094-4099.

CRITERION 7: INSTITUTIONAL FACILITIES

Standard 7.1: Infrastructure

- The department must have the infrastructure to support new trends in learning and research.
- Department has established new laboratory for research related to crop physiology and also working for developing new laboratories.
- Equipments are not sufficient to meet the current requirement of research.

Lack of institutional facilities

- Insufficient facilities regarding the infrastructure to support new trends in learning or prevalent.
- Department library must be developed to provide support to graduate and post graduate students.
- Computer facilities should be provided to the staff and postgraduate students.
- Offices must be adequate to enable faculty to carry out their responsibility.

Standard 7.2: Library Facilities

The university Central Library has very limited number of books, journals and periodicals. It's a small library in term of space and facilities with no catalogue systems. It does not meet the standards of a university library. Department itself does not have a library.

Standard 7.3: Class Room and Faculty Offices

No class room available. Research laboratories are being used for teaching purpose also, which affect the working of research students. Two to three teachers are sharing rooms. Unavailability of most modern and related books and internet affects the quality of teaching. Common room for students is also missing.

CRITERION 8: INSTITUTIONAL SUPPORT

- Institutional support is highly appreciated.
- The up gradation of existing teaching cadre also provided and added advantage in detaining the present faculty.
- Sufficient secretarial support, technical staff and office equipment.

Lack of Institutional support

- Due to unavailability of class rooms, classes are taken in the laboratories.
- Financial support should be raised and allocate funds for postgraduate research students.

Standard 8.1: Support and financial resources

The department has limited funds and Individual research grants for students and faculty are mainly supporting the departmental research activities. There is a dire need for increasing the financial resources allocated to the department to establish a library, laboratories and computer facilities.

Standard 8.2: High quality Research scholars

The intake is once in a year. A strict merit policy applies and University test/GRE/NTS is preferred.

Standard 8.3: Financial resources

Total budget of the department of agronomy for the financial years 2008-09 and 2009-10 was Rs. 24000 and 202000 respectively which does not fulfill the departmental needs particularly for the purchase of equipment, chemicals etc.

List of Enrolment for last few years

Around 3-5 students get admission in Ph.D. Agronomy every year.

Summary

The Department of Agronomy has well research based program of Ph.D Agronomy guided by highly qualified faculty. The course aims to develop and strengthen students capacity to grasp principles and practices Agronomy based on scientific basis and get research training on farmers oriented problems. The strong academics learned during Ph.D Agronomy helps them to design and conduct quality research for their doctorate degree. In addition they have sufficient specialist knowledge in selected areas to allow them to pursue a research degree in crop science. Doctorate students acquire scientific background as well as having gained experience in problem solving and have developed the communication, numerical and computer skills required for a wide range of careers. In order to assess whether department is fulfilling its objectives or not, surveys on various aspects such as course evaluation, teacher evaluation, alumni survey, research/graduating students surveys and faculty survey etc. have been conducted by the departmental members of the program team. The data were collected on prescribed proforma and later on analyzed and presented in the form of graphs and tables. The data revealed that students are satisfied with the subject approach of faculty members, their fairness in examination, and level of knowledge. Course evaluation survey showed that students are satisfied with workload and value of knowledge provided to them. But the availability of internet and access to various scientific journals is limited. Similarly, department has limited budget (Rs. 202000) for research purposes which cannot support laboratories and research activities.

According to employer students are good at job but they have very basic knowledge of information technology and computer skills. Faculty members are satisfied with their salaries but they have severe concerns about the workload as most of them are agreed that they have very less time for themselves.

- The performance of the department may be further improved considering; separate class rooms are required to enable the Ph.D students to continue laboratory works without breaks.
- Departmental Laboratories need strengthening through new equipments.
- There is also need to improve mix of research and teaching proportion to produce professionally sound graduates,

- At present there are no arrangements for professional training of the staff. Such trainings will improve their abilities for enhancing the quality of research and teaching. It would be worthy to mention here that proper man at proper place is not being practiced.
- There is a shortage of personal computers and unavailability of Internet which creates many impediments. Improvement in this area will also speed up the level of research and teaching,
- The budget allocated to the department hardly meets the requirements of the research,
- At present there is no departmental library. Allocation of sufficient funds for this purpose will be helpful in subscribing reputed journals and purchase of books that will ultimately boost quality of learning, teaching and research,

Annexure-1

List of Courses offered by the Department For Ph.D students

S. No	Course No.	Title	Credit Hours
1.	AGRO-710	Crop Nutrition	3(3-0)
2.	AGRO-712	Plant water relations	3(2-2)
3.	AGRO-717	Integrated agriculture	3(3-0)
4.	AGRO-720-I	Seminar	1(1-0)
5.	AGRO-720-II	Seminar	1(1-0)

Compulsory courses for Ph.D. students

(i) Statistics
(ii) Bio-chemistry
(iii) Integrated Agriculture

Annexure-2

Proforma 9 : FACULTY RESUME

Name	**Dr. Muhammad Ashraf**	
Personal	Father's Name	Faiz Ahmad
	Date of Birth	01-09-1952
	Age	56 years

	NIC# 37405-0330488-3 Teaching & Research Experience 27 years Address Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi Academic Qualification Uni. of Agric. Faisalabad 1974 Agronomy B. Sc. (Hons.) Uni. of Agric. Faisalabad 1976 Agronomy M.Sc. (Hons.) Oregon State Univ.USA 1992 Agronomy Ph. D.
Experience	Assistant Research Officer Agric. Department 1981-82 Sugarcane agronomy Govt. of Punjab Lecturer Agronomy Barani Agric. College 1982-86 Teaching Agronomy Rawalpindi Assistant Professor Barani Agric. College 1986-98 Teaching Agronomy/Univ. of Arid Agriculture and supervision of Rawalpindi thesis research Associate Professor Univ. of Arid Agriculture, 1998-2007 Teaching agronomy supervision of thesis research

	Professor PMAS-AAUR 28-4-2007 to-date Teaching Agronomy and supervision of thesis research
Honor and Awards	First National Training Course on Biological Nitrogen Fixation, October 1982 NARC, Islamabad National In-Service Training Course on "Manpower Planning & Employment" Pakistan Manpower Institute Ministry of Labor, Manpower & Overseas Pakistani (Manpower Division) Islamabad, 7th August, 1986 Intensive Course of 214 Hours in English for Academic Purpose. Academy for Education Development United States Agency for International Development Islamabad March 5th, 1987. A Short Course on Computer Application for agricultural and Natural Resource Manager Department of Rangeland Resources. Oregon State University, Corvallis USA. March 25 1991. A Seminar on Participatory Irrigation Management. Economic Development Institute of the World Bank and Ministry of Water and Power, Govt. of Pakistan, October 2-6, 1994. A Basic Course on BASICS OF COMPUTER, DOS, WINDOWS'95 and MS WORD September 23, 1997. UIMS. Univ. of Arid Agriculture, Rawalpindi International Workshop on "Intensive farming & integrated resource management: Traditional & Non-traditional Approaches" Organized by Univ. of Arid Agriculture, Rawalpindi. April 28-30, 2004

Publications	Aziz, I., M. Ashraf., T. Mahmood And K.R. Islam. 2010. Crop Rotation Impact On Soil Quality. Pak. J. Bot., 43(2): 949-960.
Memberships	Membership Professional Societies Agronomy Society of America, Crop Science of America and Soil Science Society of America Wisconsin, USA (1988-1992) Soil Science Society of Pakistan (1994-onward). Pakistan Association for the Advancement of Science. 73-N Model Town, Lahore(1994-1996) Membership Academic Bodies Member National Curriculum Revision Committee of Agronomy, HEC, Islamabad. Subject matter Specialist. Punjab Service Commission, Lahore. Member Academic Council, Univ. of Arid Agriculture, Rawalpindi Member Finance and Planning Committee, Univ. of Arid Agriculture, Rawalpindi (2003- onwards). Member Synopsis and Thesis Scrutiny Committee, Univ. of Arid Agriculture, Rawalpindi(1992-1996). Consulting Editor, Sharhad Journal of Agriculture, N.W.F.P. Agric. Univ., Peshawar Consulting Editor, Pakistan Journal of Arid Agriculture, Univ. of Arid Agriculture, Rawalpindi External Examiner, Agricultural College, Quetta, Univ. of Quetta External Examiner, Univ. College of Agriculture B.Z. Univ. Multan

	NAME OF STUDENT	TITLE	Completion Date
Graduate Students Postdocs Undergraduate Students Honour Students	Amir Aman Ullah	Effect of potassium on growth, development and yield of maize	1993-95
	Safdar Ali	Effect of nitrogen on growth, development and yield of maize (Zea mays)	1993-95
	Farooq Ahmad	Performance of soybean varieties under Islamabad conditions	1995-97
	Abid Mahmmood	Productive efficiency of of soybean intercropping in spring sunflower	1995-97
	Ijaz-ul-Hassan	Association of Rhizobium japonicum strains with soybean genotypyes	1995-97
	S. Mujahid H. Qaisar	Effect of magnesium on growth, development, yield and yield components of maize (Zea mays)	1994-97
	Hafiz M. Bakhsh	Effect of Rhizobium strains on nodulation and yield of groundnut genotypes	1998-2000
	Iftikhar Ahmad Chaudhry	Interaction of Rhizobium strains and varieties of lentils	1998-2000
	Aftab Afzal	Effect of phosphorus solubilizing microorganisms on phosphorus uptake, yield and yield traits of wheat (Triticum aestivum L.)	1999-2001
	Zafar Iqbal	Allelopathic effects of sorghum on suppression of weeds in rainfed wheat (Triticum aestivum L.)	2000-2002
	Naveed Shahzad	Effect of phosphorus on growth, development and yield of maize (Zea mays)	2001-2003
	Muhammad Akhlaq	Weed suppression by water extract of sorghum plant parts in wheat	2001-2003
	Shahbaz Naeem	Sunflower and sorghum water extracts for weed control in wheat	2001-2003
	Ishaq Zafar	Yield attributes of mungbean in response to inoculum strains	2002-2004

	Mehr Ali	Yield and yield components of groundnut under different rainfed conditions	2003-2005
	Ahsan Munir	Effect of nitrogen supply on growth, development and yield of wheat	2004-2007
	Yasir Habib	Allelopathic effects of brassica and barley herbage water extract on wheat weeds suppression under rainfed conditions	2008
	Fahad Karim Awan	Allelopathic effects of sorghum, sunflower and brassica for weed control in wheat	2008
	Zahid Iqbal Khan	Influence of concentrated sorghum water extract alone and in combination with herbicide for weed control in rainfed wheat	2009
	Irfan Sharif	Evaluation of concentrated sunflower water extract alone and with low doses of herbicides for weed control in barley	2009
	M. Sajid Mahmood	“”Effect of Barley Residue Water Extract in Combination with Low Doses of Herbicide on Weed Control and Yield of Mungbean	2010

PH.D. STUDENTS THESIS SUPERVISED

Shuiab Kaleem 2010 Physio-morphic expression of sunflower in response to environmental variations.

Naeem Ahmad 2006 Response of wheat to subsurface soil compaction and improvement strategies.

Abdul Manaf 2006 Phenotypic plasticity of Brassica in response to environment and sulphur nutrition

M.Sc(Hons) Students thesis supervised

Samiullah Khan, 2000. Heat units requirement of Sunflower.

	Rana Ashfaq Ahmad, 2001 Seasonal variation in sunflower. Abid Hussain, 2001 Performance of sunflower in relation to root depth. Attiq-ur-Rehman 2003 Comparison of wheat cultivars for water use efficiency and qualitative traits under rainfed conditions. Shahzad A. Hakium 2005 Response of sunflower to Sulphur and seasonal variations. Asim Irfan 2005 Feasibility of intercropping Mungbean in Sunflower under Rainfed conditions. Ahmad Sher 2006 Performance stability of Canola cultivars under different Agro-ecological regions of Pothwar. Muhammad Tahir 2007 Integrated use of herbicide and tillage methods for moisture conservation and subsequent canola yield. Yasir Khurshid 2008 Comparative evaluation of some local and exotic safflower genotypes Muhammad Arif 2009 Response of Sinapis alba to Agro-management techniques. Muhammad Farooq 2009 Effects of Agro-management Techniques on Camelina sativa. Mubashir Ali 2009 Response of Linola to Agro-management techniques.

Name	**Prof. Dr. Fayyaz Ul Hassan**
Personal	Professor of Agronomy Department of Agronomy University of Arid Agriculture, Rawalpindi Phone Office: +92-51-9062217, Cell: 0300-9514597 Fax Office: +92-51-9290160 e-mail:fayyaz.sahi@uaar.edu.pk drsahi63@gmail.com Phone Residence: +92-51-4848187
	Name: Fayyaz-ul-Hassan Date of Birth: 15-05-1963 Father's Name: Abdul Latif Permanent Address: Village & Post Office TOOR, Teh. & Distt. JHELUM
	EDUCATION University/Board — Degree — Year Curtin University of Technology, Perth, Australia — Post Doc — 2007 University of Wales Aberystwyth (UK) — PhD — 1995 University of Agriculture, Faisalabad (Pakistan) — M.Sc(Hons) — 1988 University of Agriculture, Faisalabad (Pakistan) — B.Sc(Hons) — 1986 Board of Intermediate & Secondary Education, Mirpur — F.Sc(Pre-medical) — 1981 Board of Intermediate & Secondary Education, Rawalpindi — Matric(Science) — 1979
Experience	As Professor 23-06-07 to date Main Duties: • Teaching postgraduate and undergraduate courses. • Supervision of PhD and M.Sc student's research. • Planning & Management of University Research Farm.

	• Planning & Execution of cropping pattern/ scheme at Research Farm. • Writing, planning and execution of research projects. • Financial and operational management of research projects & Farm. As Associate Professor 29-05-04 to date 22-06-2007 projects. • Financial and operational management of projects. • Advisory service when and where needed. As Assistant Professor: From 22-1-1998 to 29-05-04 As Assistant Agronomist (Water Management): From 15-1-1992 to 22-1-1998. As Agricultural Officer (Water Management): From 16-11-1989 to 15-1-1992. As Assistant Research Officer: From 1-1-1989 to 15-11-1989. MANAGEMENT EXPERIENCE Assistant Warden, From July, 1993 to September, 1995 Cwrt Mawr student's Hall of Residence, University of Wales Aberystwyth (UK).
Honor and Awards	Ministry of Education Scholarship for PhD 1992. Overseas Research Students Award 1994-95(Awarded by CVCP UK). Endeavour Pakistan Research Award by Govt. of Australia, 2007

Publications	Shuaib Kaleem, Fayyaz- ul- Hassan, Abdul Razzaq, Abdul Manaf and Aamir Saleem 2010: Growth rhythms in sunflower (Helianthus annuus L.) in response t environmental disparity. African J. of Biotechnology. 9(15); 2242-2251. Aamir Saleem , Fayyaz-ul-Hassan, A. Manaf and M. S. Ahmedani. 2009 Germination of Themeda triandra (Kangaroo grass) as affected by differen environmental conditions and storage periods. African J. of Biotechnology. 8(17) 4094-4099.
Supervised Students	PH.D STUDENTS THESIS SUPERVISED Naeem Ahmad 2006 Response of wheat to subsurface soil compaction and improvement strategies. Abdul Manaf 2006 Phenotypic plasticity of Brassica in response to environment and sulphur nutrition M.SC(HONS) STUDENTS FHESIS SUPERVISED Samiullah Khan, 2000. Heat units requirement of Sunflower. Rana Ashfaq Ahmad, 2001. Seasonal variation in sunflower. Abid Hussain, 2001. Performance of sunflower in relation to root depth. Attiq-ur-rehman 2003 Comparison of wheat cultivars for water use efficiency and qualitative traits under rainfed conditions. Shahzad A. Hakium 2005 Response of sunflower to Sulphur and seasonal variations. Asim Irfan 2005 Feasibility of intercropping Mungbean in Sunflower Under Rainfed conditions. Ahmad Sher 2006 Performance stability of Canola cultivars under different Agro- ecological regions of Pothwar. Muhammad Tahir 2007 Integrated use of herbicide and tillage methods for moisture conservation and subsequent canola yield.

Service Activity	Teaching and Research.
Brief Statement of Research Interest	• Crop production and Management. • Oilseed crop production and enhancement. • Alternate crop production. • Soil conservation and crop production