

## **Introduction**

Department of Botany, PMAS Arid Agriculture Rawalpindi, is one of pioneer department of university with diverse, exciting and challenging expertise in almost all fields of plant science. The main programme at initial level was M.Sc started in 1996. Department has a broad curriculum and 1/3 courses are also contributed for M.Sc Biology besides B.Sc (Hons.) Agriculture, MBA (Agri-Business), Department of Forestry and Range Management. Post graduate classes for M.Sc are taken both in morning and evening session. The graduate of this department is ranked amongst the best of country. About 92 students are doing their M.Sc from this department and number of passed out students are 652 for M.Sc. The Department is incessantly following HEC's recommendations for impost and updation of its activities.

The department also has dedicated and hardworking faculty comprising of 10 teachers. Out of them 7 are Ph.D, 2 are almost near to completion of their Ph.D and one is M.Phil. Faculty members have broad range expertise ranging from plant taxonomy to molecular level. All faculty members are highly motivated and actively involved in research activities and academic progress. An extensive scheme of studies has been developed for post graduate degree program in the field of Botany including all major aspects such as ecology, genetics, physiology, taxonomy, anatomy, molecular biology of plants and biochemistry. These classes are taught by faculty who enjoy teaching and have a commitment to education. Besides teaching faculty members also ensures students participation in laboratory exercises, practicals as well as field sites. In conclusion students have a better knowledge of flora of Pakistan i.e., identification, uses and applications. Department of Botany prepares students for careers in industry, government agencies and teaching jobs

## **SECTION 1**

### **Components of Self-Assessment Process:**

This Self-Assessment has been prescribed on the cradle of the eight criteria described in self-Assessment Manual. The Self-Assessment Report (SAR) contains eight sections. The first section outlines the program mission and objectives. Section 2 provides information about the curriculum development. Section 3 enlists the laboratories and other relevant information followed by student support and guidance. The last four sections provide information about student support, process control, faculty characteristics and institutional facilities and support provided by the university.

### **Criterion-1: Program Mission, Objectives and Outcomes**

#### **Introduction**

The department of Botany is dynamically tangled in education of eclectic diversity of courses and worth exploration programs to lift and settle the M.Sc students' expert proficiency level.

#### **Standards 1-1: Documented measurable objectives**

##### **Mission Statement of the Department**

Our Mission is to regulate, indorse, and conduct acquaintance regarding basic plant biology and fetch supremacy in the biological sciences.

##### **Objectives**

1. To produce highly capable botanists who have a comprehensive knowledge of current and applied plant science and excellent career prospects
2. To bequeath the department with integration of knowledge in linked fields.
3. To transport inventive thinking in students to grow cost effective research accomplishments.

#### **Main Element of The Strategic Plan To Achieve Program Mission And Objective.**

- To develop and maintain research programs those comprise the roots for teaching and provision, and sustain those activities at the forefront of emerging disciplines.
- Establishment of academia by expending the teaching structure based upon capability, hard work, in transformation with modern line of studies.
- Upgradation of research laboratories.

- Launching field trips to reconnoiter biodiversity rich areas
- Regular and periodic process of updating scheme of studies

**Outcomes:**

1. Communication skills through presentations and oral discussions.
2. Enhancement of knowledge and vision in the field of Botany.
3. Students are attaining careers in numerous national teaching institutes.

Sr. #	Objectives	How Measured	When Measured	Improvement Identified	Improvement Made
1	To augment acquaintance	It is measure via mid, and final examinations, quizzes, and assignments	Through mid and at the end of semester.	Better out show in assignments and grades	Technical and conceptual quiz and question papers
2	Addition of knowledge	Expressed by the students evaluation and feed back	At the end of each academic year	Offering of some new courses.	Revision of curriculum as per requirement as well as in the light of HEC guidelines.
3	To instruct the mechanical evidence	Reflected by student efficacy	At the end of degree projects	Successful graduates are working in different organization	By improving

Programs objectives	Program Outcomes		
	1	2	3
1	Perfection of Academic background of successful graduates	Improved show in different competitive exams	Absorption of the graduates in different Government and Non-Governmental Organization
2	Faculty with specialization in relevant fields.	Need oriented research projects are running	Better performance of qualified graduate in knowledge application
3.	Inculcation of interest and spirit in academics and	No. of research publications, techniques introduced; research	New courses to be included in curriculum, research on new problems



	research in the field of Botany	projects submitted & completed; evaluation by students during the whole academic year	
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## **Program objectives**

### **Meeting Standards 1-2: Program Outcome Measurement**

A number of assessments based on the SAR questionnaires were commenced to assess the Program outcomes/ graduates of the department and teacher's evaluation. Maximum students filled the survey forms.

### **Program Assessment Results:**

The outcomes of Program assessment by the SAR are presented in graphical method. However, the inclusive outcomes show that the students are contented with the Program and method of teaching.

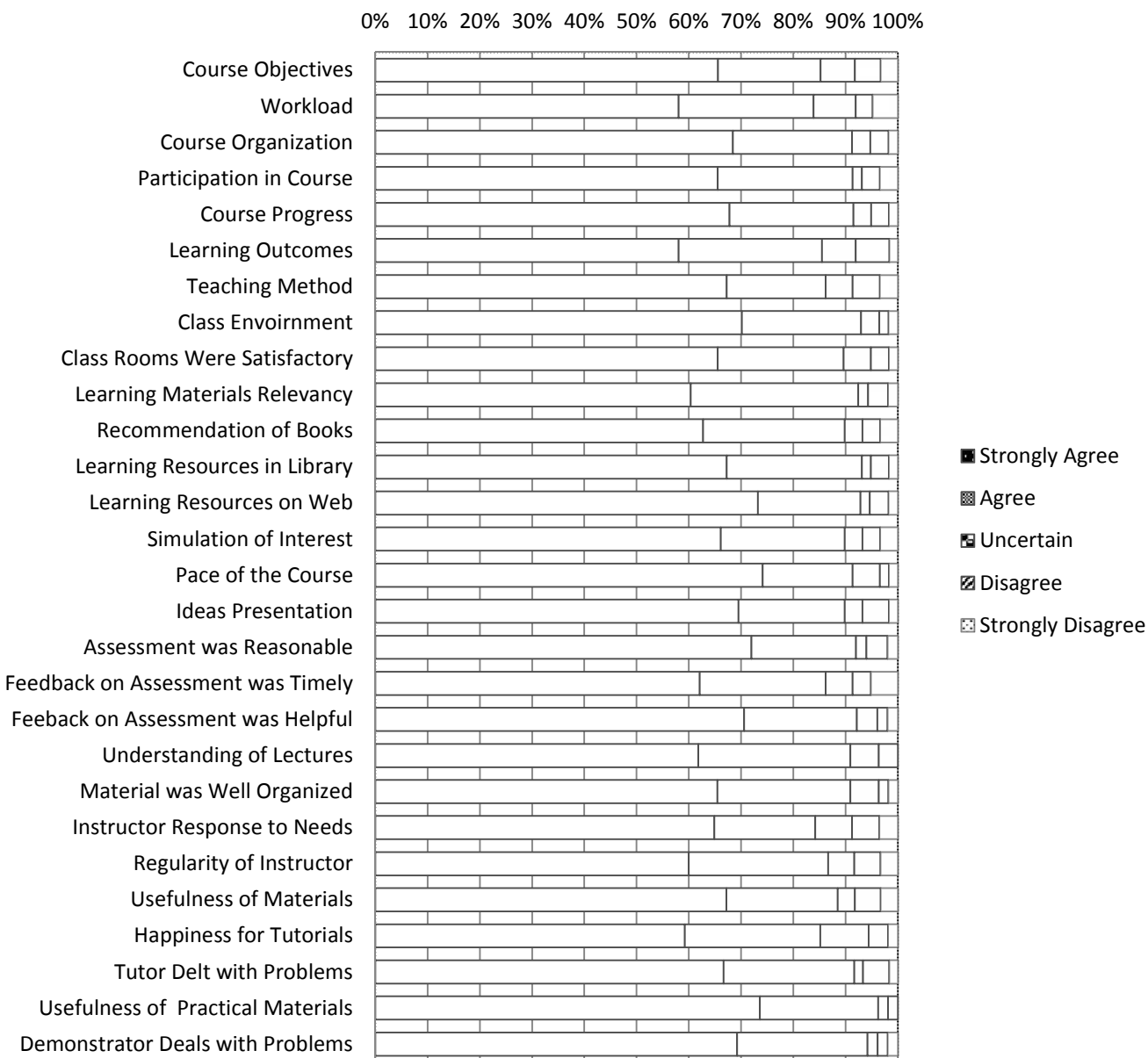
### **Student Course Evaluation**

Maximum of the students favor almost the course contents of each course, their prospect and applications in daily life beside with the presentation by the concerned tutor. The outcomes of this survey are presented graphically, which are affixed.

M. Sc.

Student Course Evaluation

**BOT-701**  
**Mr. Zia Ur Rehman Mashwani**

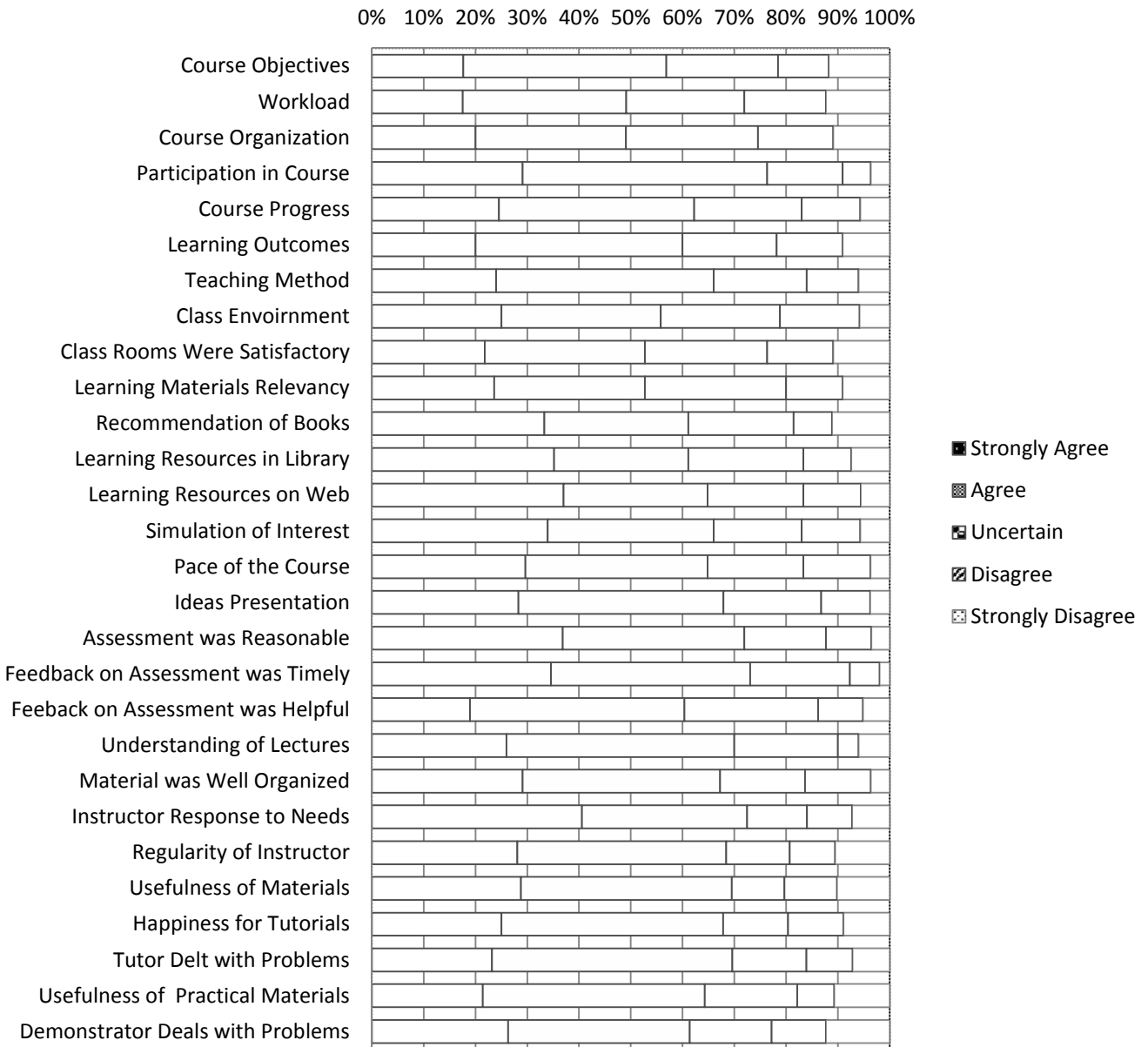


**General Comments of the Students about this Teacher**

**Weaknesses:** Learning outcomes were not very clear

**Strengths:** Class environment was satisfactory. Student showed involvement in the course.

**BOT-702**  
**Dr. Abdul Waheed**

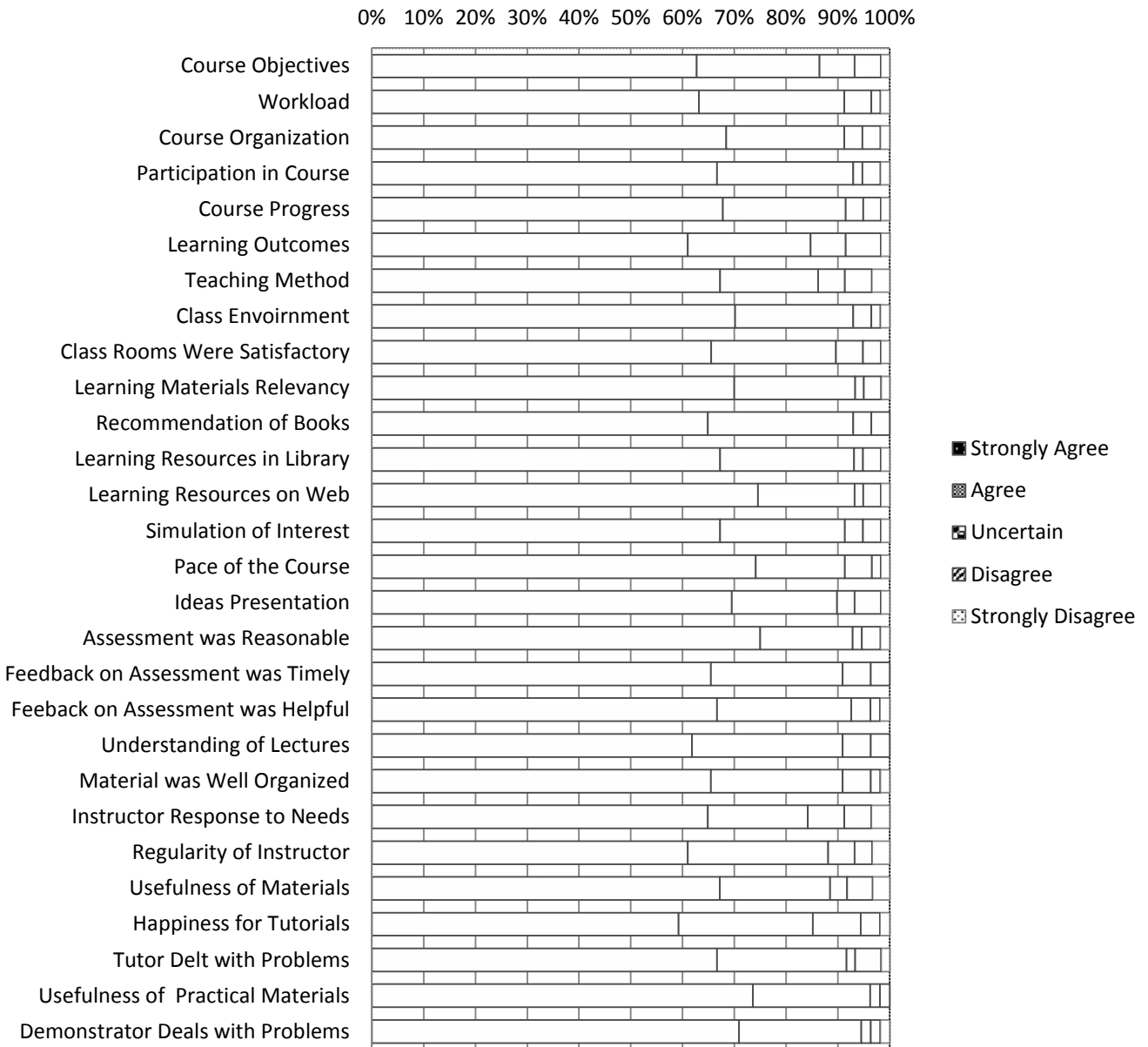


**General Comments of the Students about this Course**

**Weaknesses:** Students indicated weakness in the course. Figure exhibits that the teacher was very strict.

**Strengths:** Knowledgeable, well prepared, energetic.

**BOT-702**  
**Dr. Noshin Ilyas**

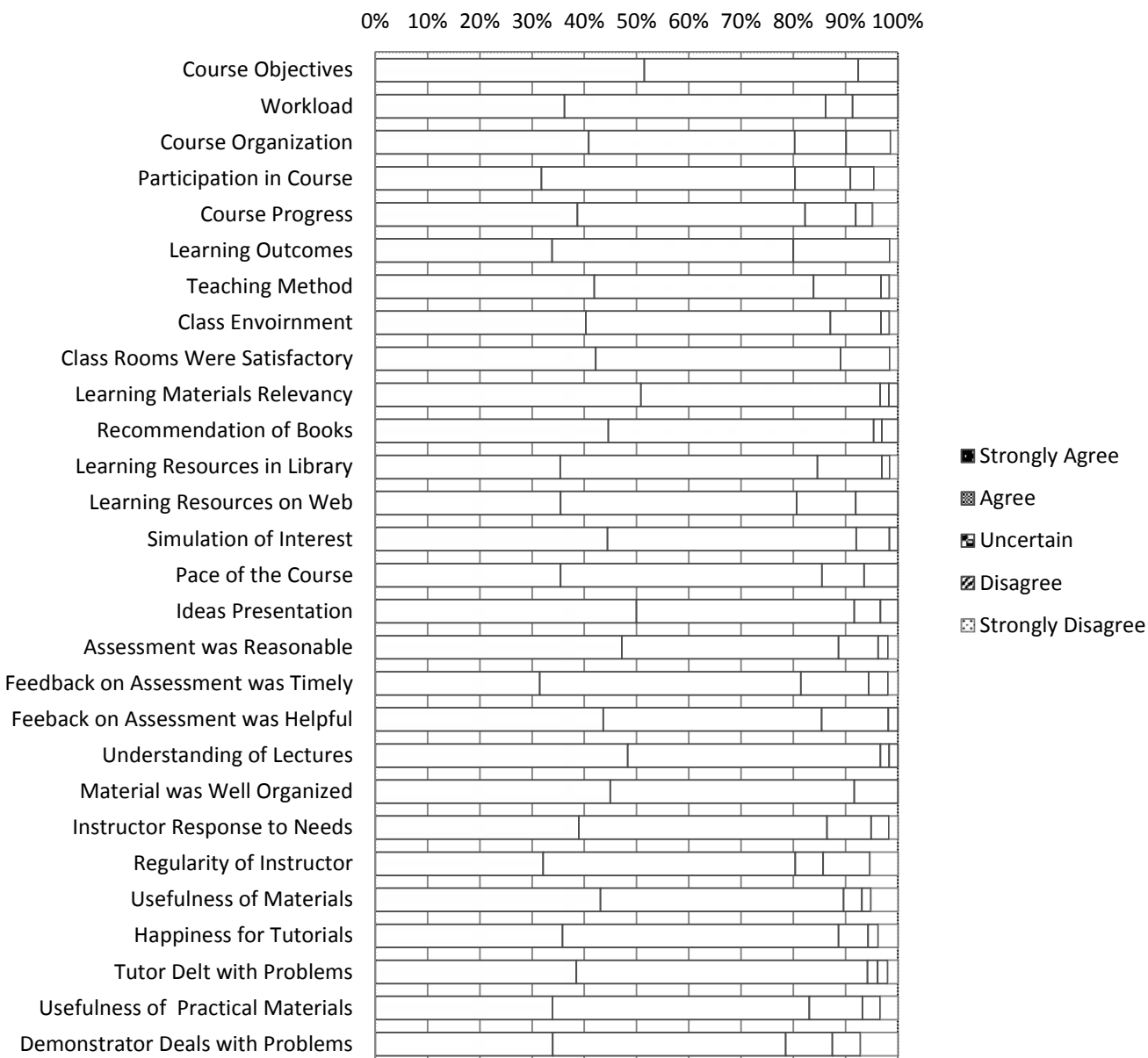


**General Comments of the Students about this Course**

**Weaknesses:** Course was very lengthy.

**Strengths:** The tutor showed reasonable conduct and statement skill, confirmed participation of students in class discussion, included recent materials in the course subjects, remained prompt

**BOT-703**  
**Dr. Naveed Iqbal Raja**

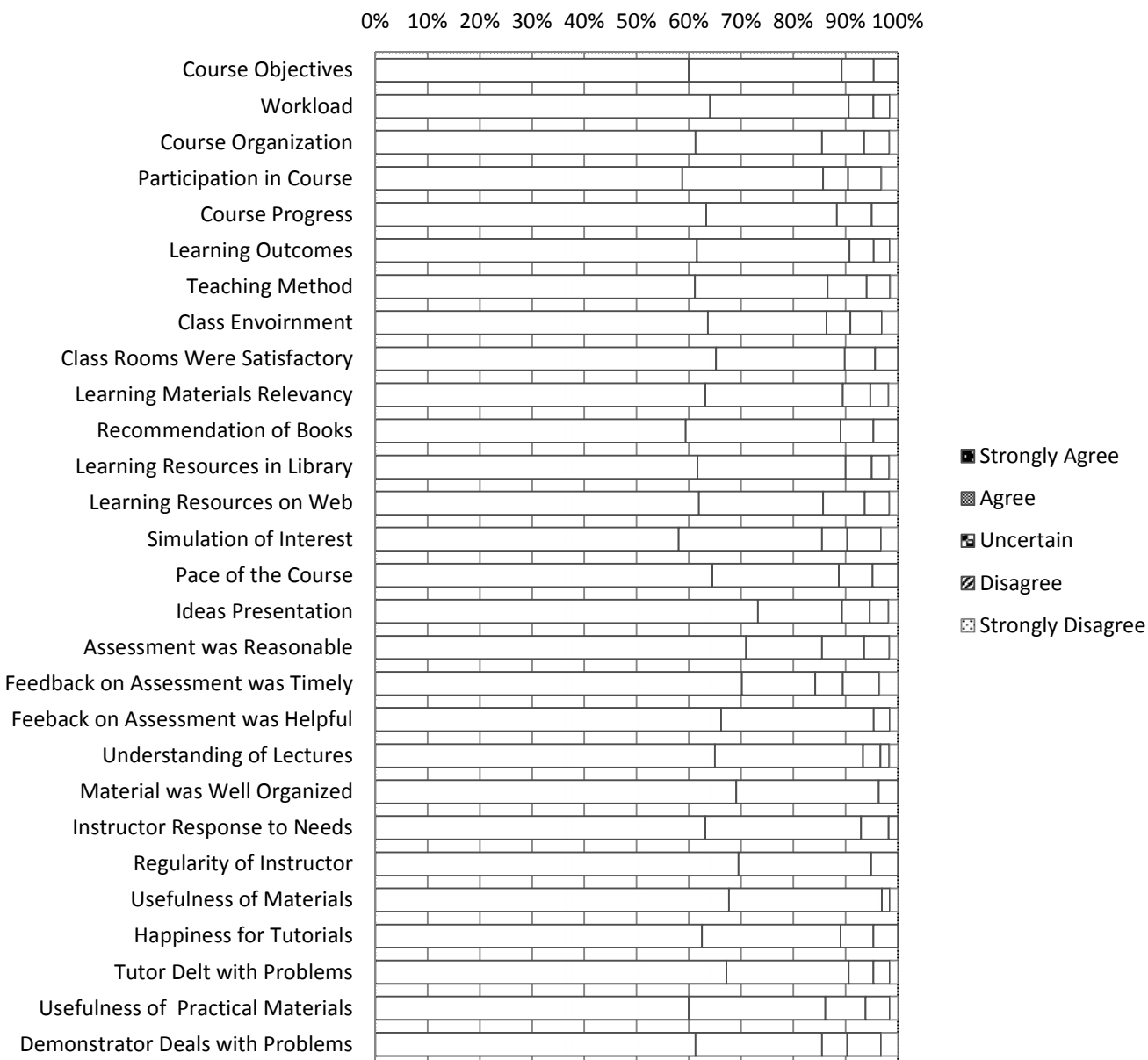


**General Comments of the Students about this Teacher**

**Weaknesses:** Workload was not manageable

**Strengths:** The tutor showed good communication skill, ensured participation of students in class discussion, and remained punctual.

**BOT-704**  
**Prof. Dr. Muhammad Arshad**



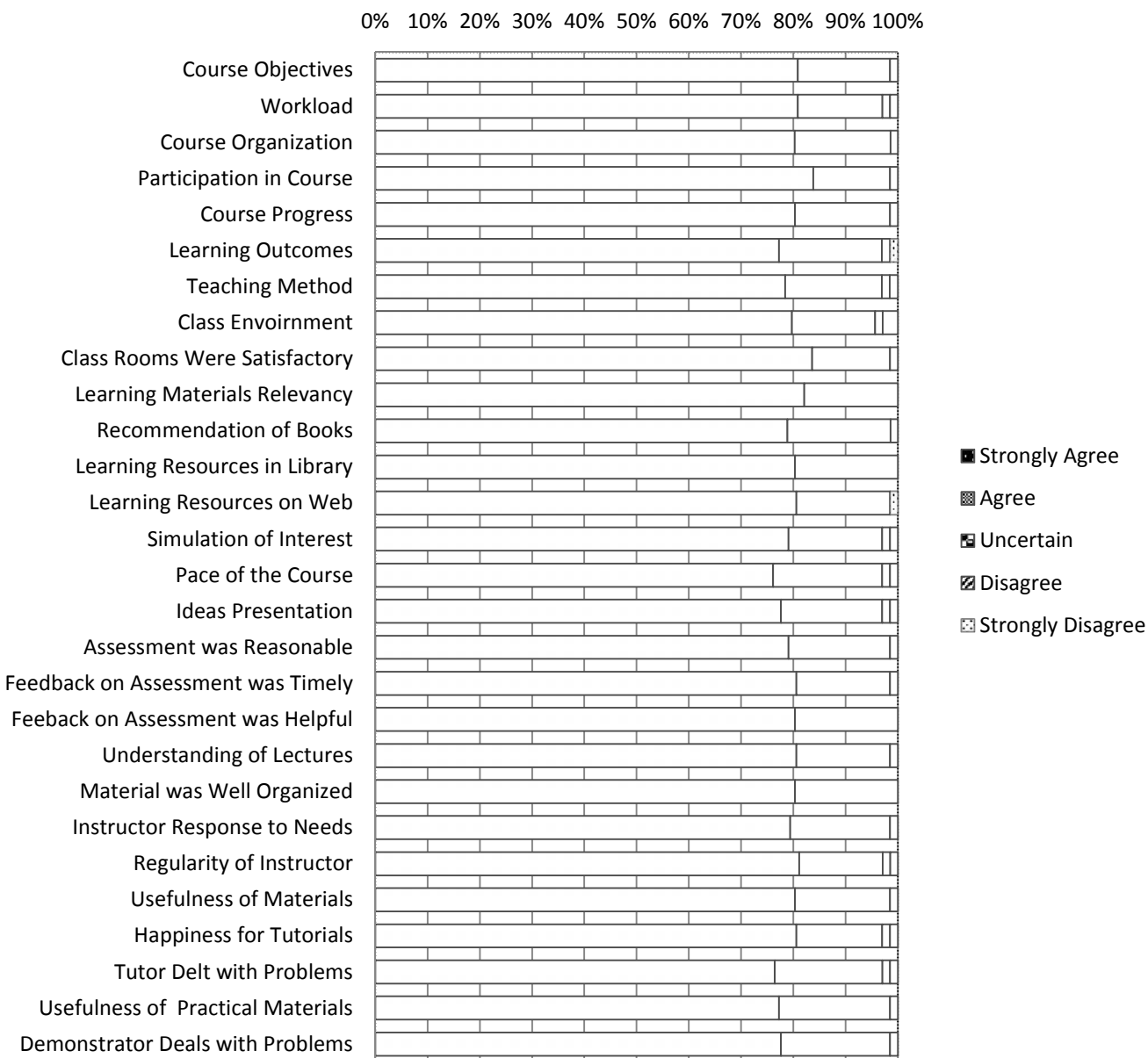
**General Comments of the Students about this Course**

**Weaknesses:** Student did not show any weaknesses

**Strengths:** The instructor offering active approach and statement skill, believed instudent involvement



**BOT-705**  
**Prof. Dr. Muhammad Arshad**

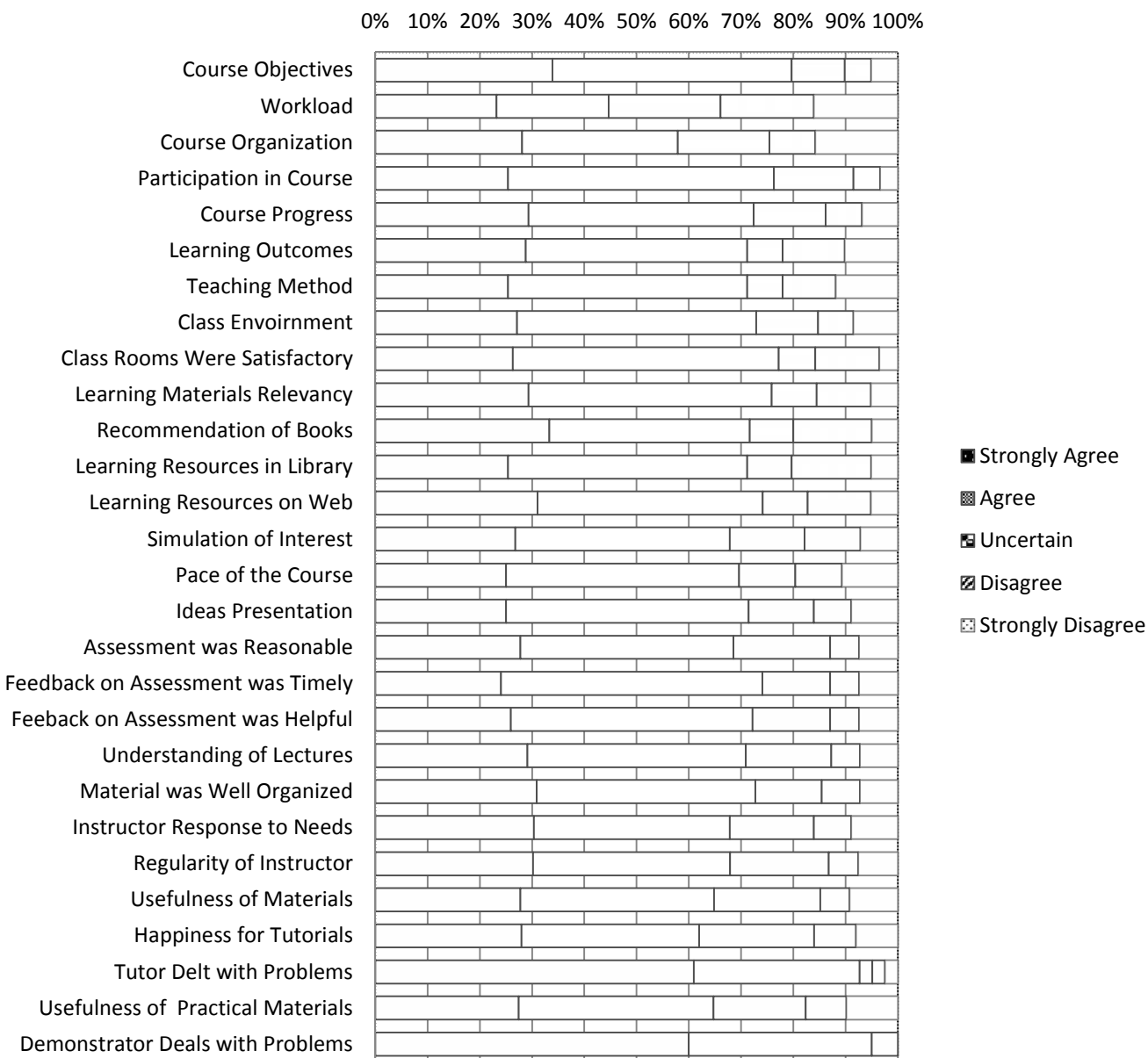


**General Comments of the Students about this Course**

**Weaknesses:** No significant weakness was indicated by the students about this course.

**Strengths:** The tutor showed reasonable attitude and communication skill, established contribution of students in class discussion, included recent materials in the course subjects, and remained prompt.

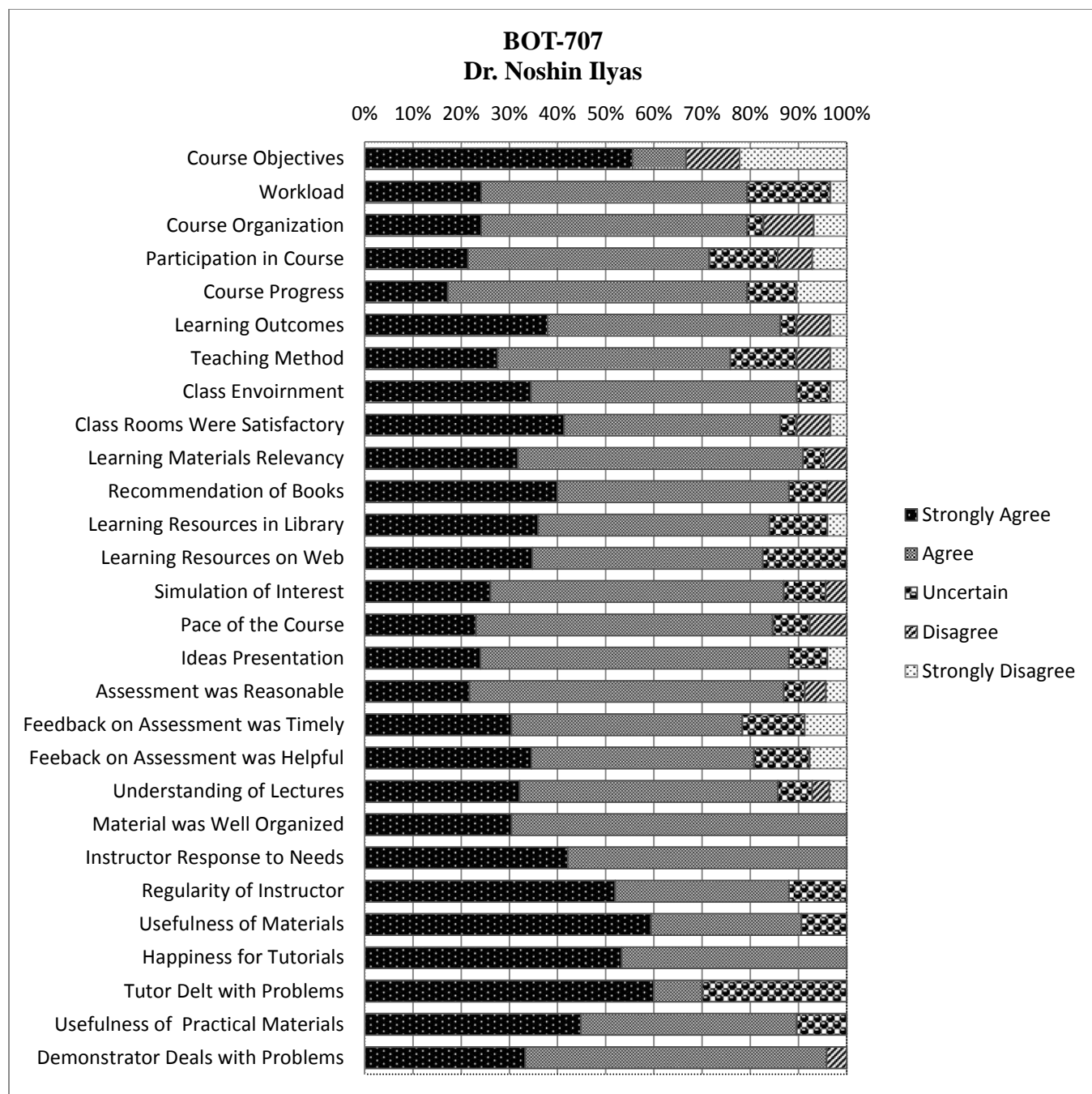
**BOT-706**  
**Mr. Zia Ur Rehman Mashwani**



**General Comments of the Students about this Course**

**Weaknesses:** Students indicated weakness in course organization and amount of the work. Teacher was strict in the class.

**Strengths:** The tutor delivered the course objectives in good manner and tried to solve out the difficulties of students.

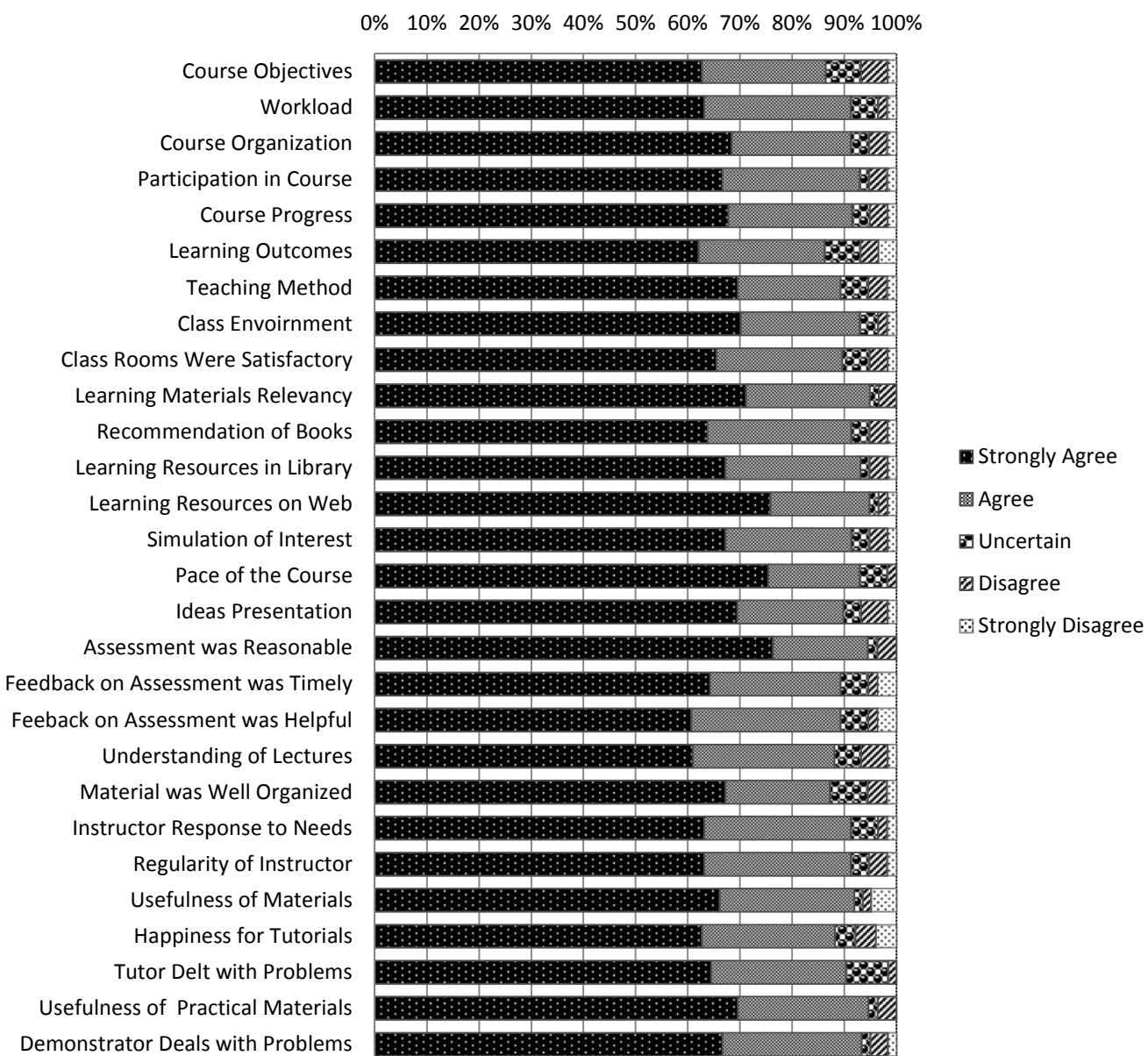


### General Comments of the Students about this Course

**Weaknesses:** Students indicated the weakness in course organization and response to students' difficulties

**Strengths:** The tutor showed reasonable attitude and communication skill for learning outcomes, included recent materials in the course subjects, and remained regular.

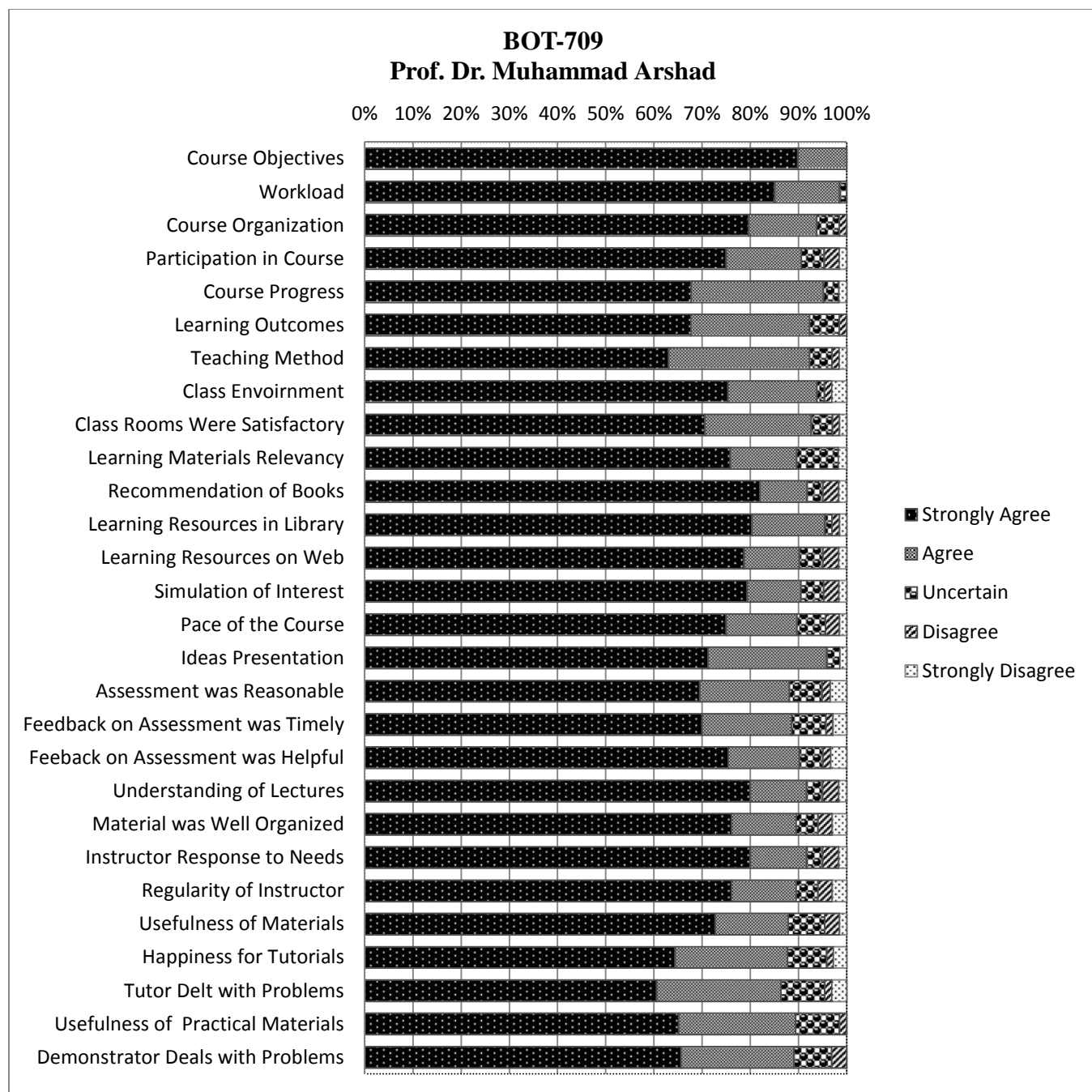
**BOT-708**  
**Dr. Abida Akram**



**General Comments of the Students about this Course**

**Weaknesses:** Students have not indicated any significant weakness in this course.

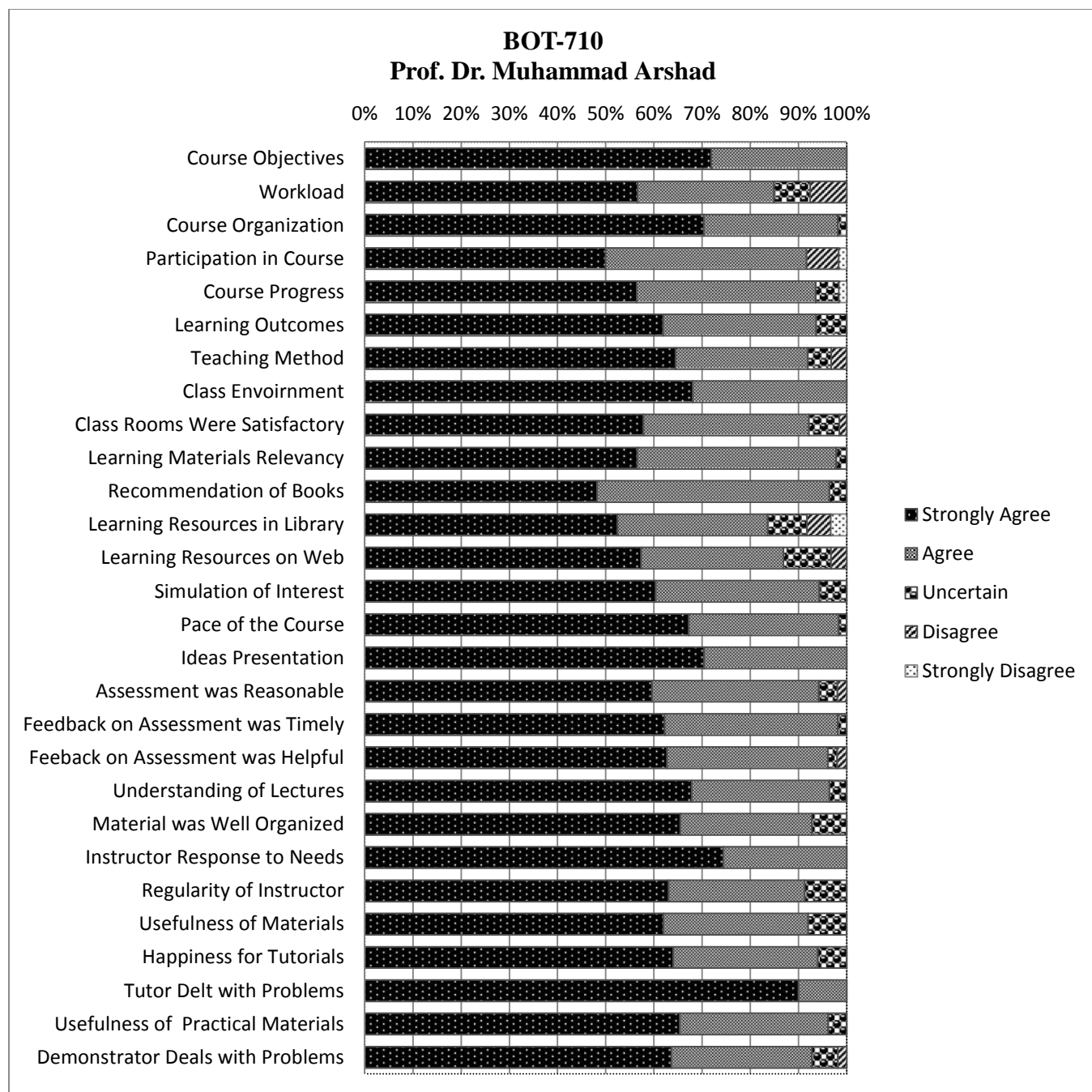
**Strengths:** The tutor showed reasonable conduct and statement skill, confirmed participation of students in class discussion, included recent materials in the course subject.



### General Comments of the Students about this Course

**Weaknesses:** Student indicated no weakness.

**Strengths:** The tutor showed reasonable attitude and communication skill and delivered the course objective. Workload was manageable.

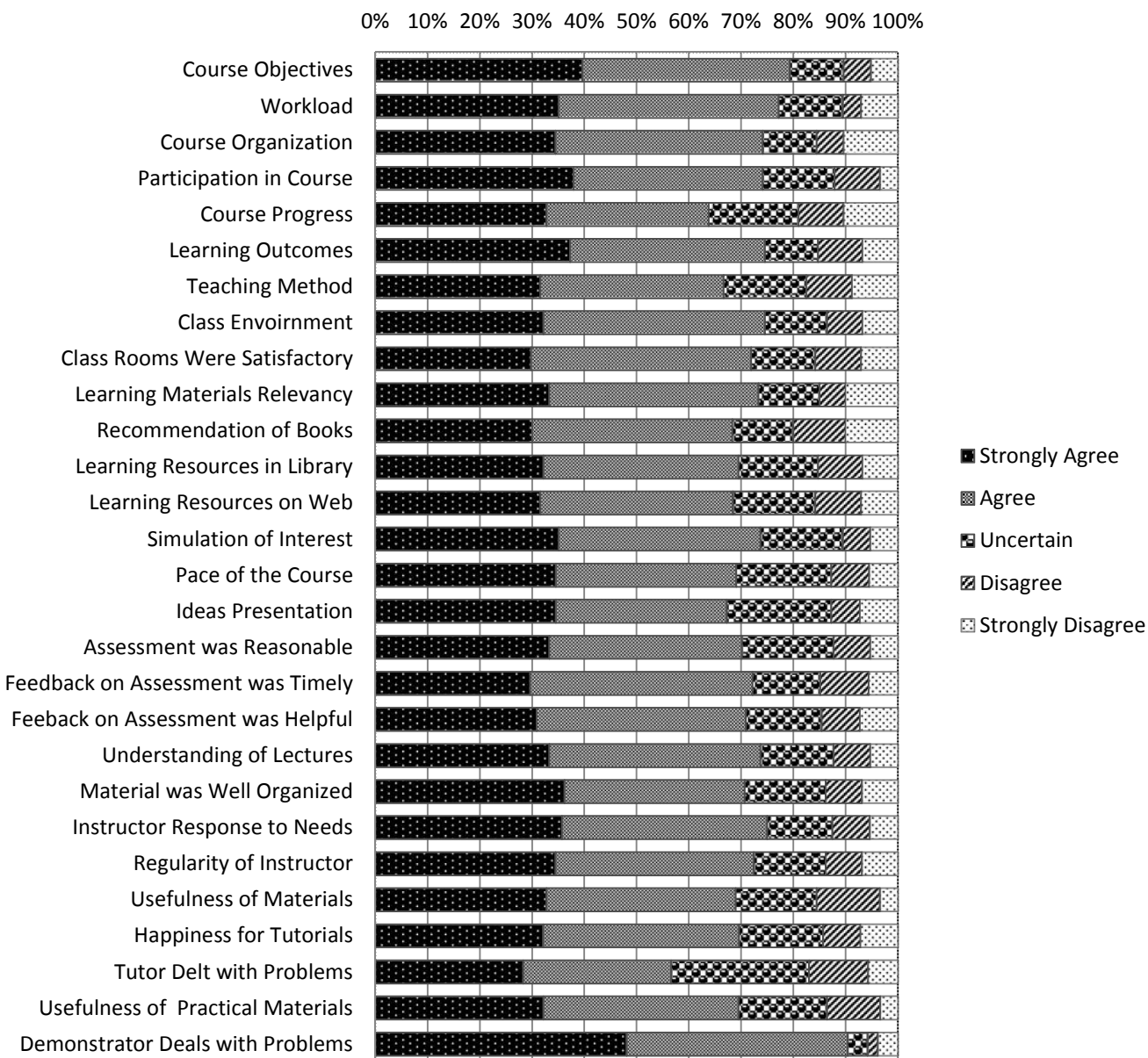


### General Comments of the Students about this Course

**Weaknesses:** Learning resources were not much helpful.

**Strengths:** Teacher established contribution of students in class discussion, included recent materials in the course subject.

**BOT-711**  
**Ms. Saira Asif**

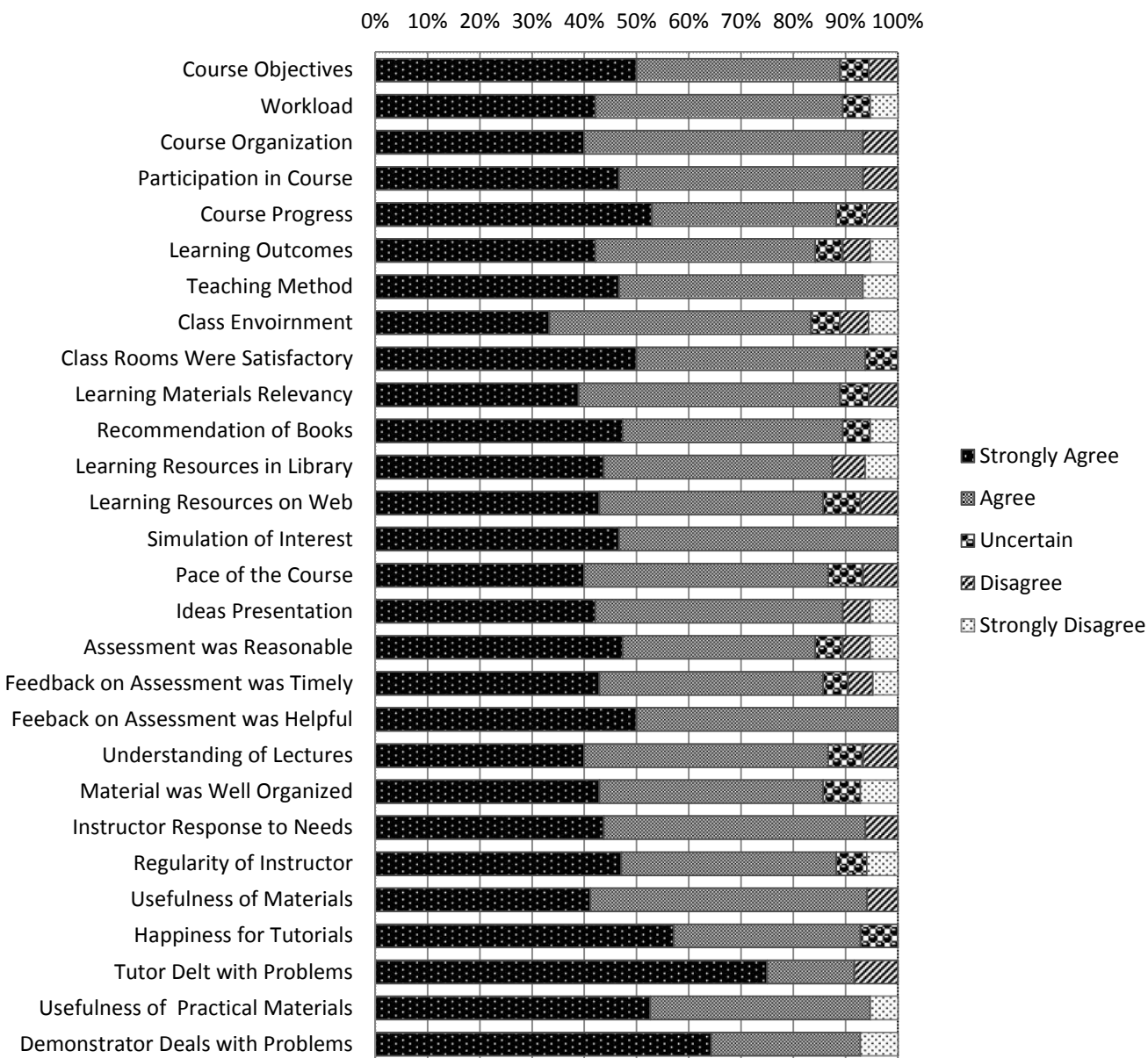


**General Comments of the Students about this Course**

**Weaknesses:** Students indicated weakness in course organization and amount of the work. Tutor looks strict to the students.

**Strengths:** The tutor delivered the course objectives in good manner and tried to deal with the difficulties of students.

**BOT-712**  
**Dr. Rehmatullah Qureshi**



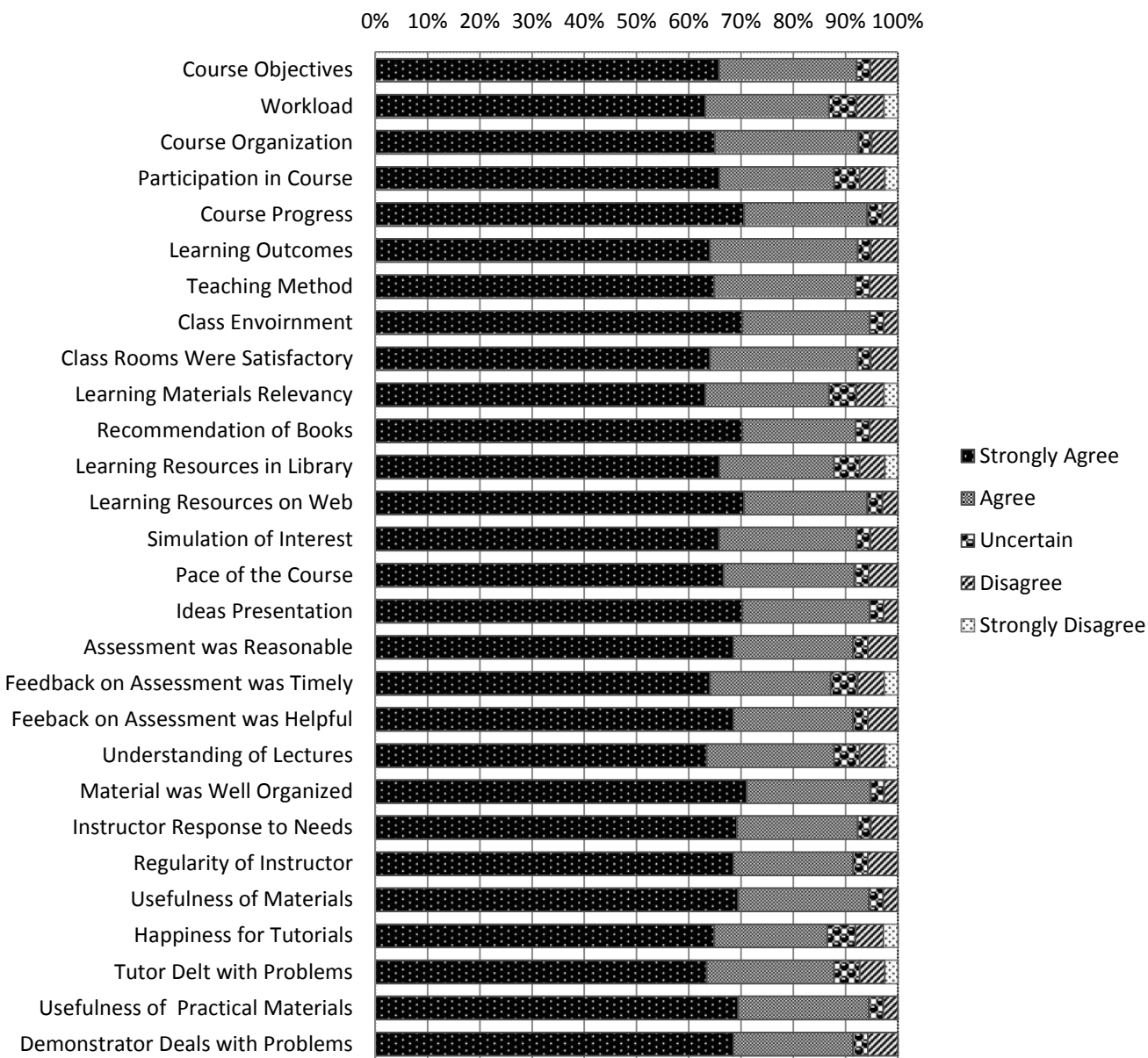
**General Comments of the Students about this Course**

**Weaknesses:** Students indicated weakness in class environment.

**Strengths:** The tutor showed reasonable attitude and communication skill. Course was organized. Teacher established contribution of students in class discussion, and feedback on assessment was useful.



**BOT-713**  
**Prof. Dr. Muhammad Arshad**

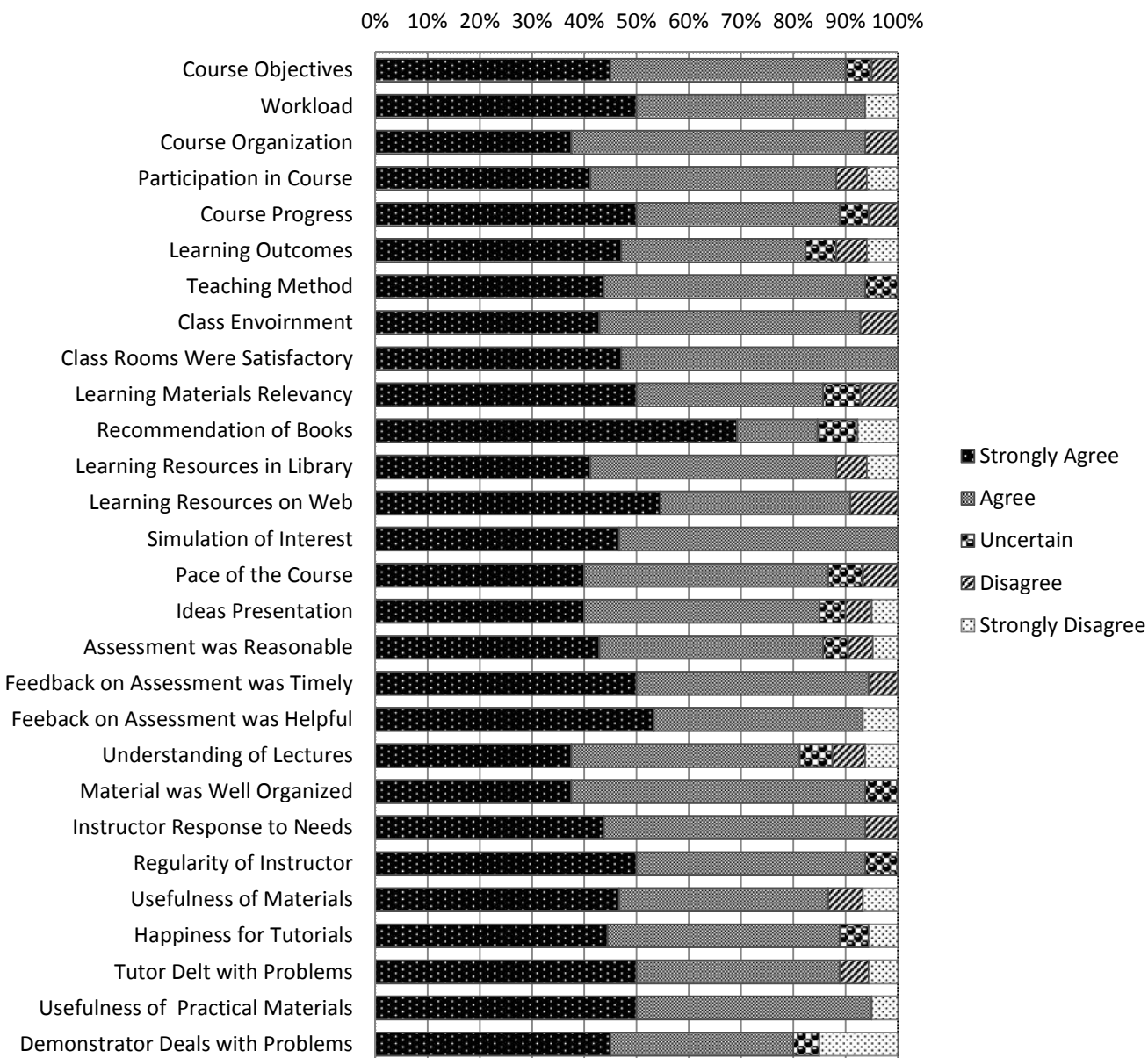


**General Comments of the Students about this Course**

**Weaknesses:** Students have not indicated any weakness in this course.

**Strengths:** The tutor showed reasonable conduct and statement skill, confirmed participation of students in class discussion.

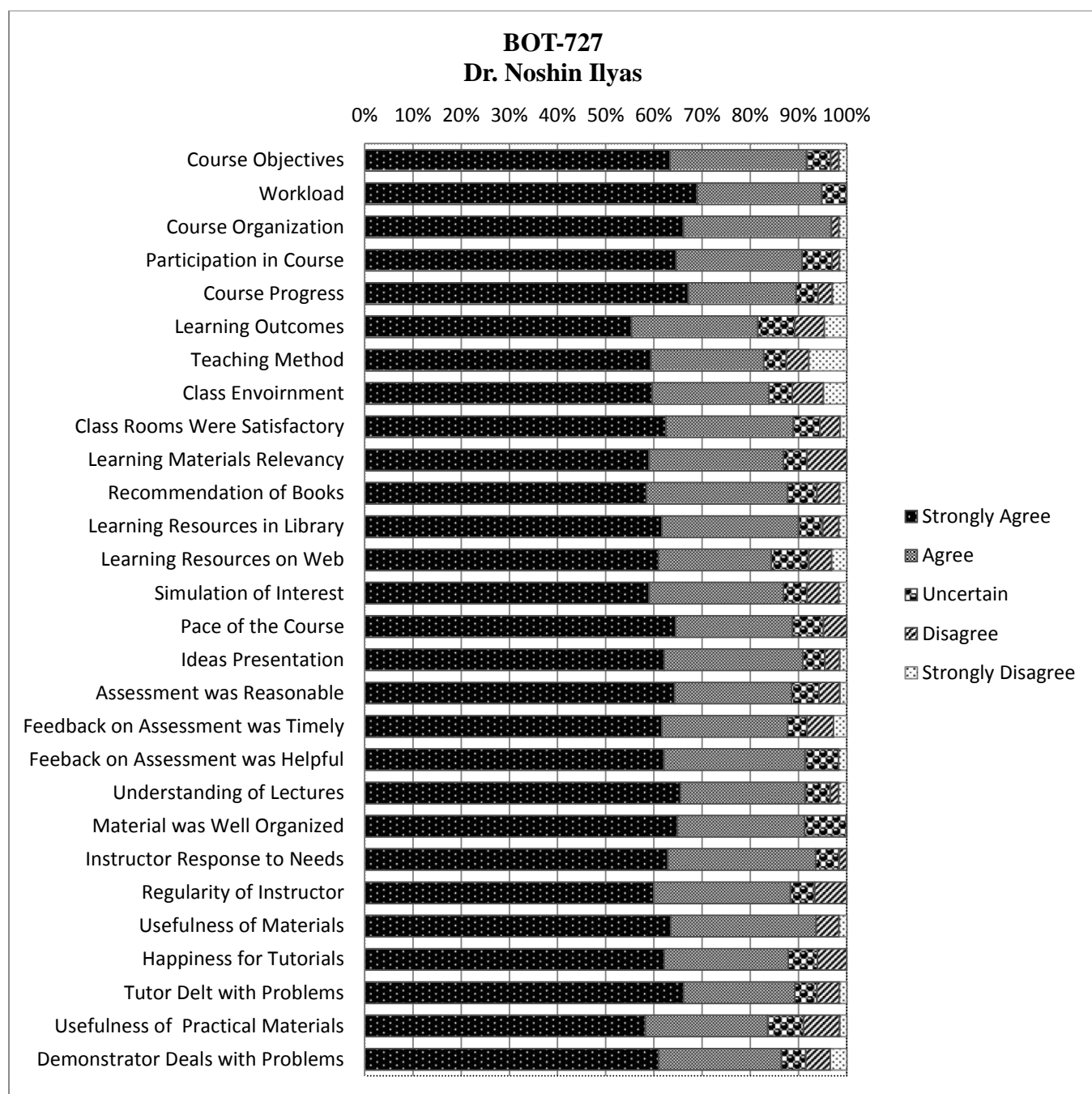
**BOT-718**  
**Dr. Yamin Bibi**



**General Comments of the Students about this Course**

**Weaknesses:** Students indicated less satisfaction about learning outcomes and understanding the lectures

**Strengths:** The tutor showed reasonable attitude and workload was manageable. Course was organized. Teacher remained regular.

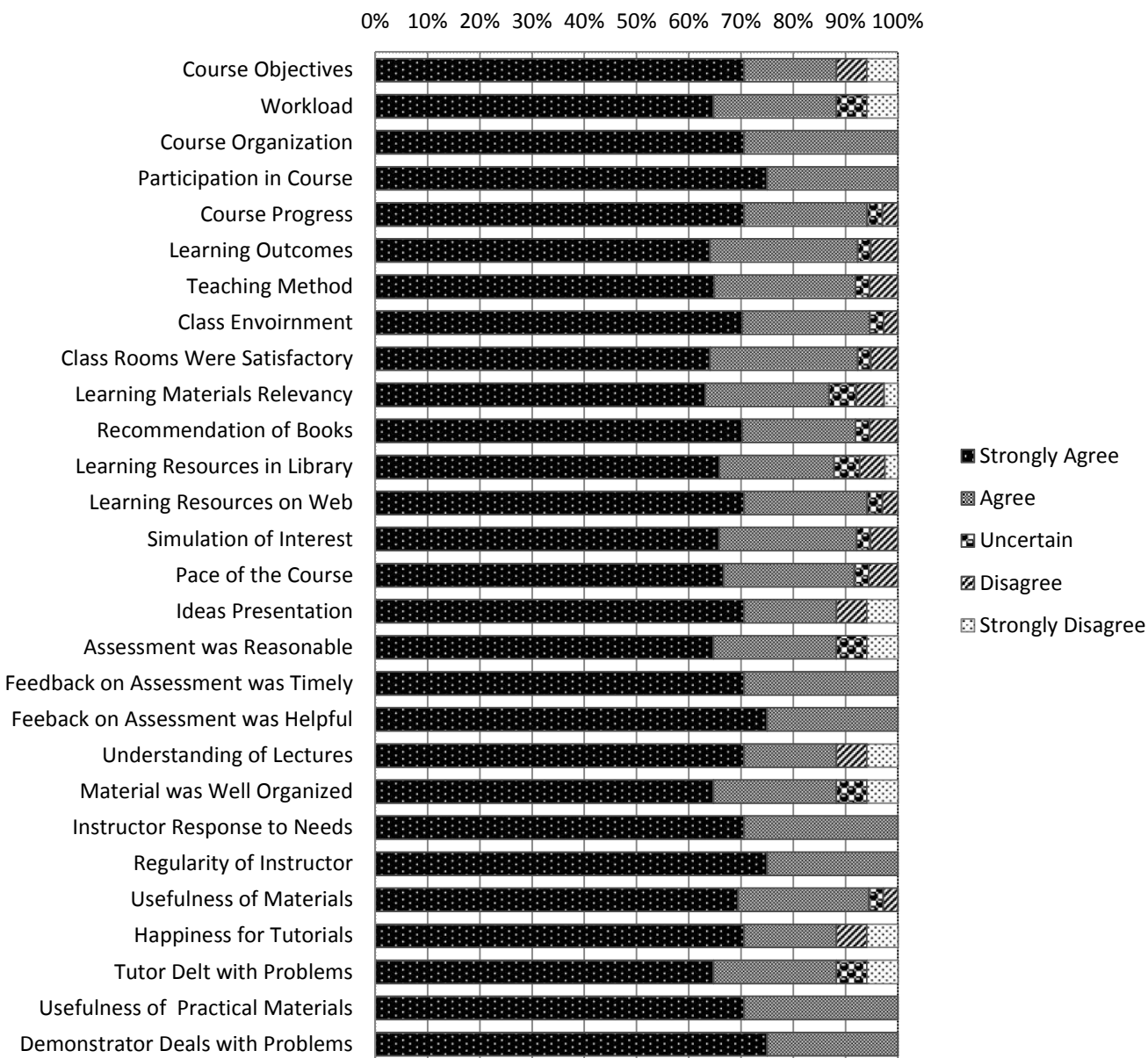


### General Comments of the Students about this Course

**Weaknesses:** Students indicated weakness in learning outcomes and learning resources on web.

**Strengths:** The tutor showed sensible attitude and workload was manageable. Course was well organized. Teacher established contribution of students in class discussion and included recent materials in the course subjects.

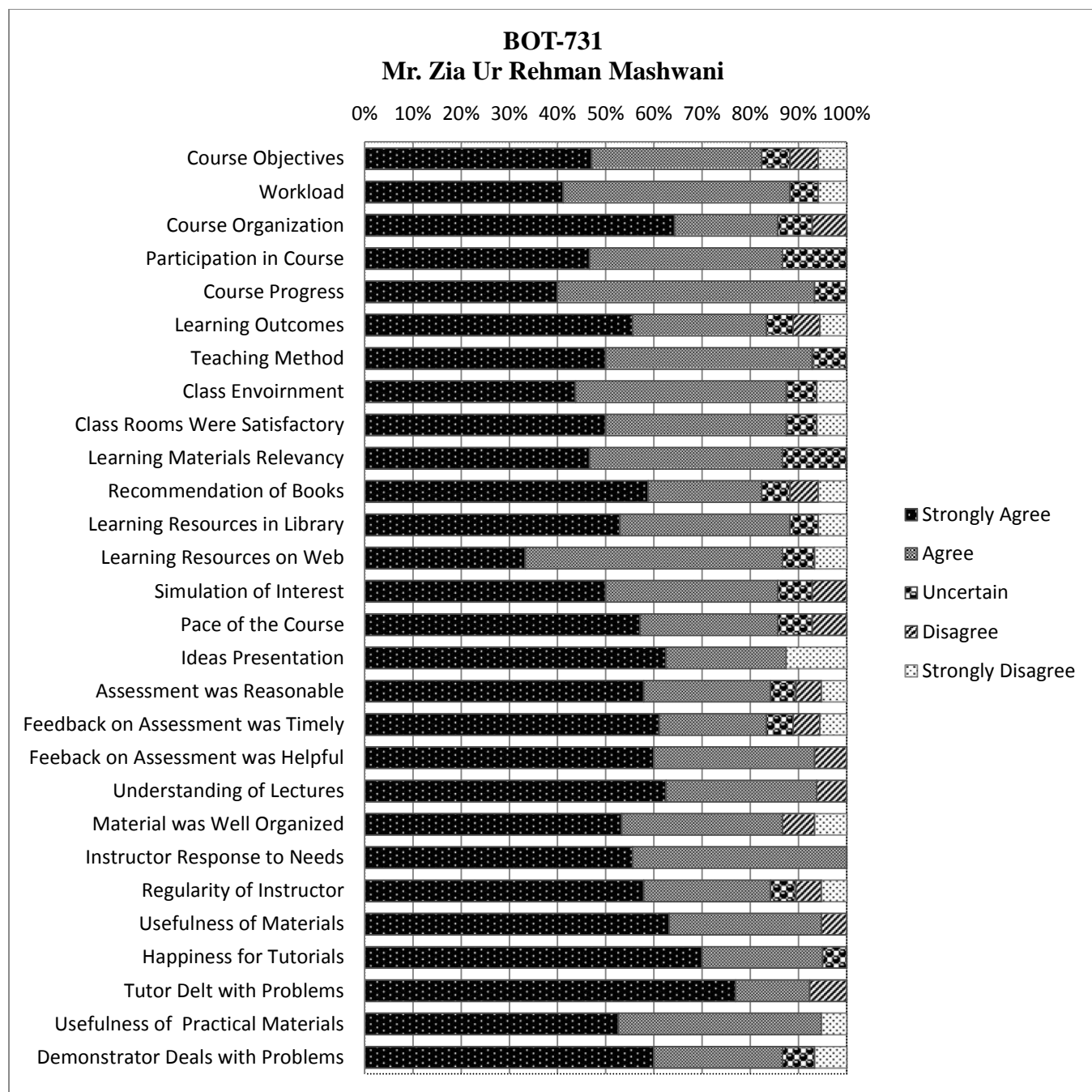
**BOT-728**  
**Dr. Naveed Iqbal Raja**



**General Comments of the Students about this Course**

**Weaknesses:** Students indicated less satisfaction about learning materials' relevancy.

**Strengths:** The tutor showed functional attitude. Course was well organized. Teacher established contribution of students in class discussion and included recent materials in the course subjects. Teacher was regular.

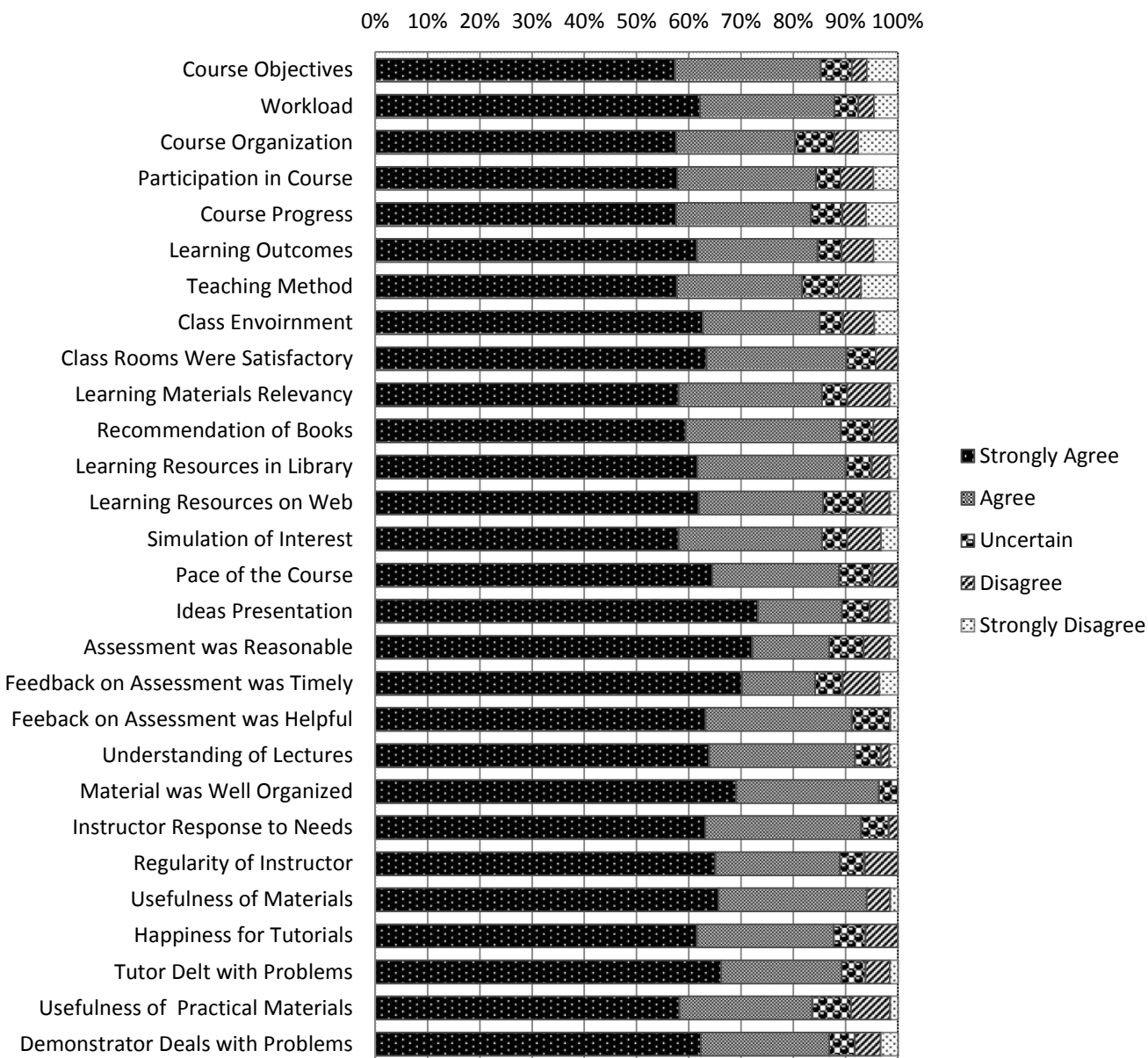


### General Comments of the Students about this Course

**Weaknesses:** Students indicated less satisfaction about learning outcomes and recommended books

**Strengths:** The workload was manageable. Teacher established progress in this course. Contribution of students in class discussion was assured and included recent materials in the course subjects.

**BOT-736**  
**Dr. Yamin Bibi**

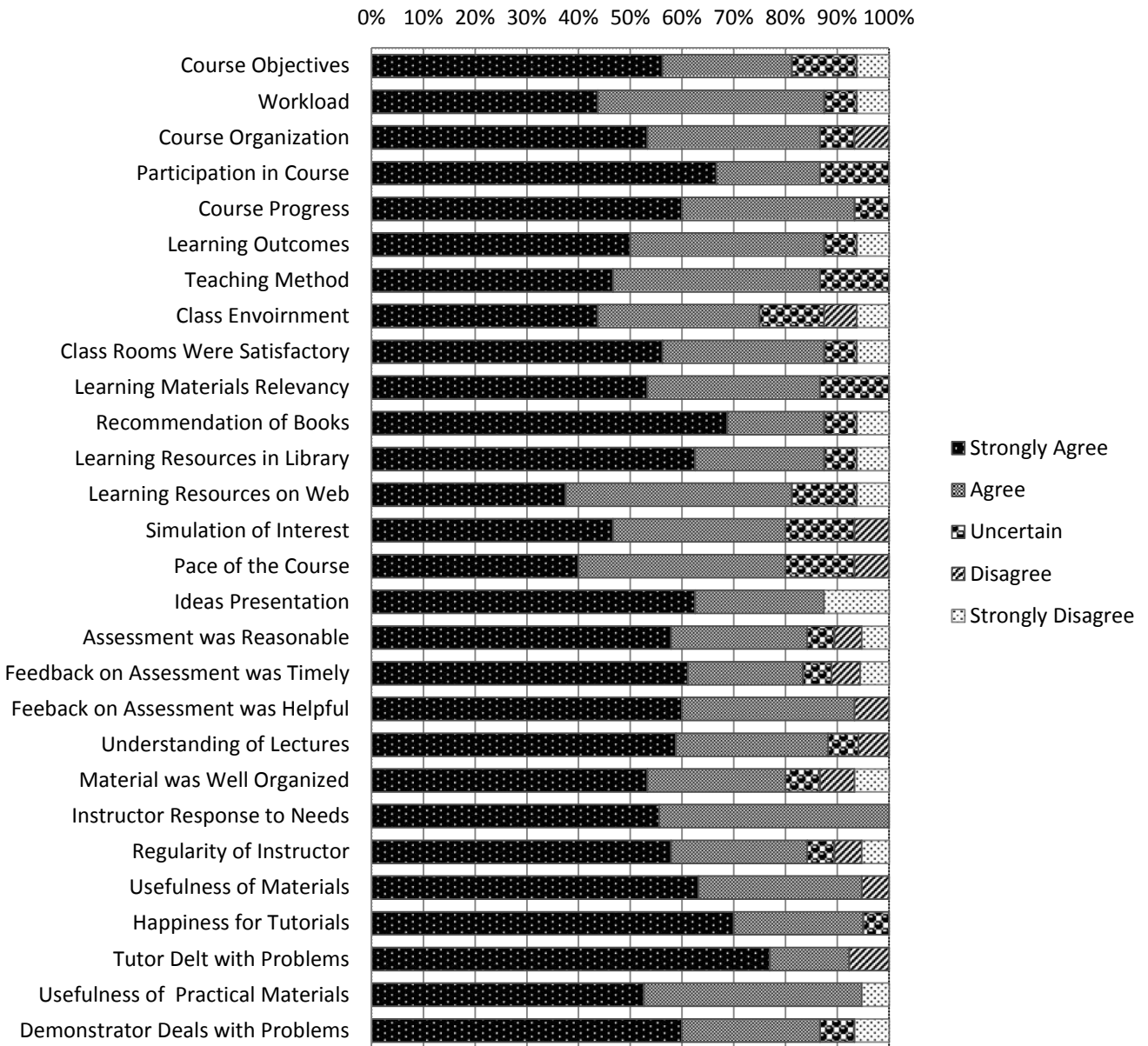


**General Comments of the Students about this Course**

**Weaknesses:** Students indicated the weakness in course organization.

**Strengths:** The tutor showed reasonable manner and communication skill, confirmed participation of students in class discussion, included recent materials in the course subjects, and responded to the students' needs.

**BOT-737**  
**Dr. Rehmatullah Qureshi**

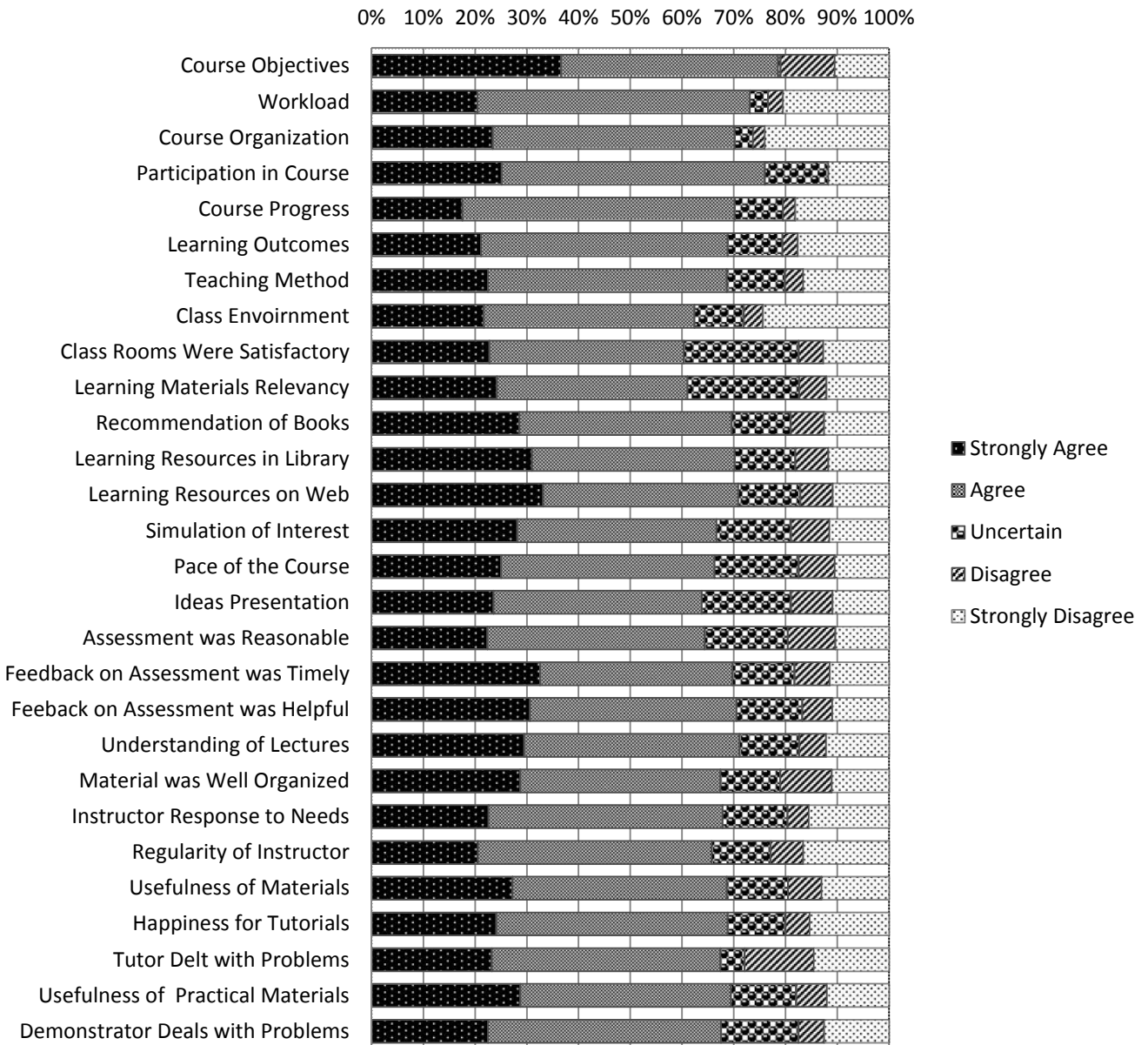


**General Comments of the Students about this Course**

**Weaknesses:** Students indicated weakness about course objectives

**Strengths:** Teacher established progress in this course. Contribution of students in class discussion was assured and included recent materials in the course subjects.

## BIOL-701 Dr. Abdul Waheed



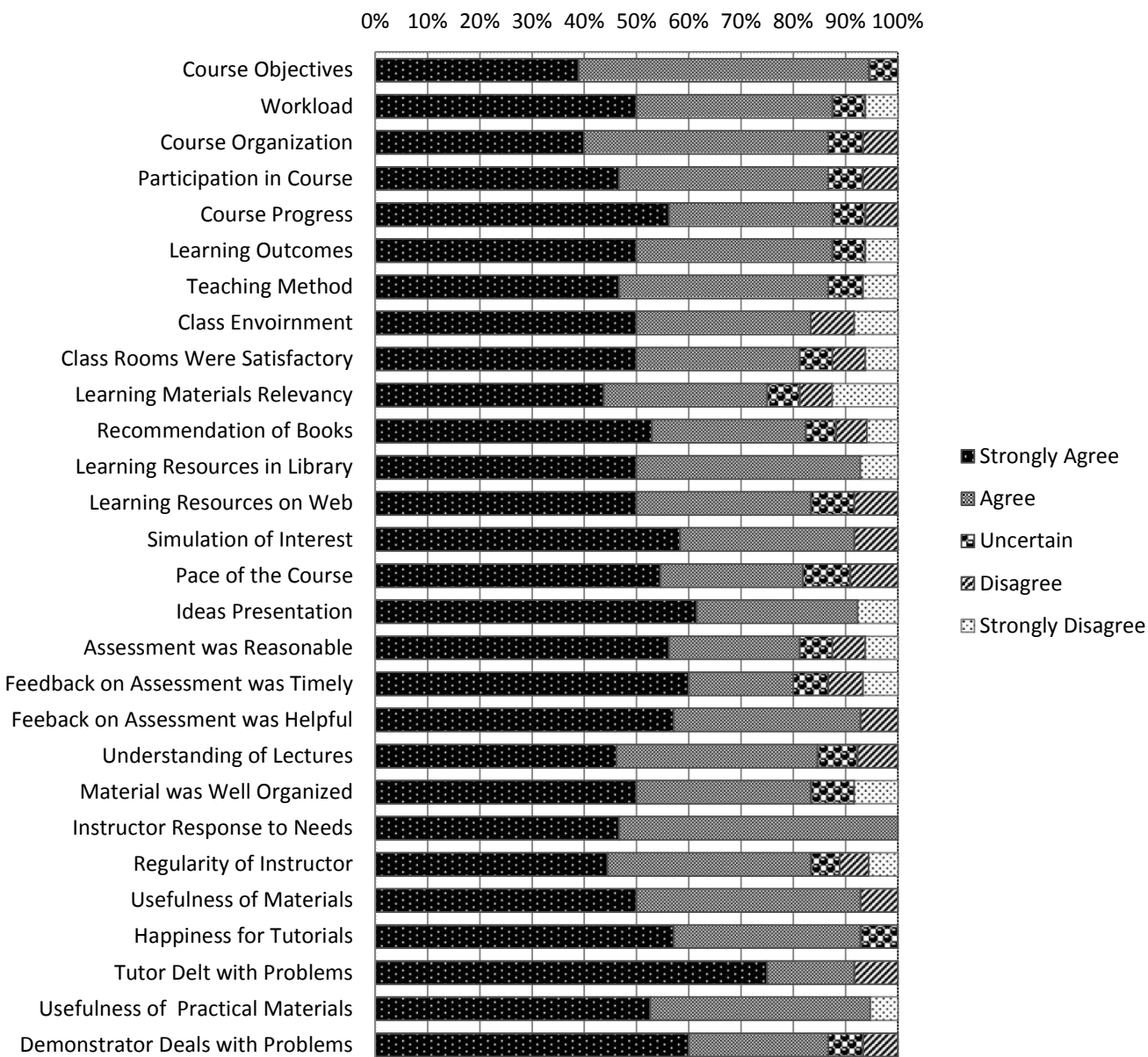
General Comments of the Students about this Teacher

**Weaknesses:** Feedback assessment was weak. Teacher looks very strict to the students.

**Strengths:** Instructor was capable to communicate this course in a respectable routine, with all characteristics of training, communication skill, contribution, including modern concepts, punctuality and behavior, etc.



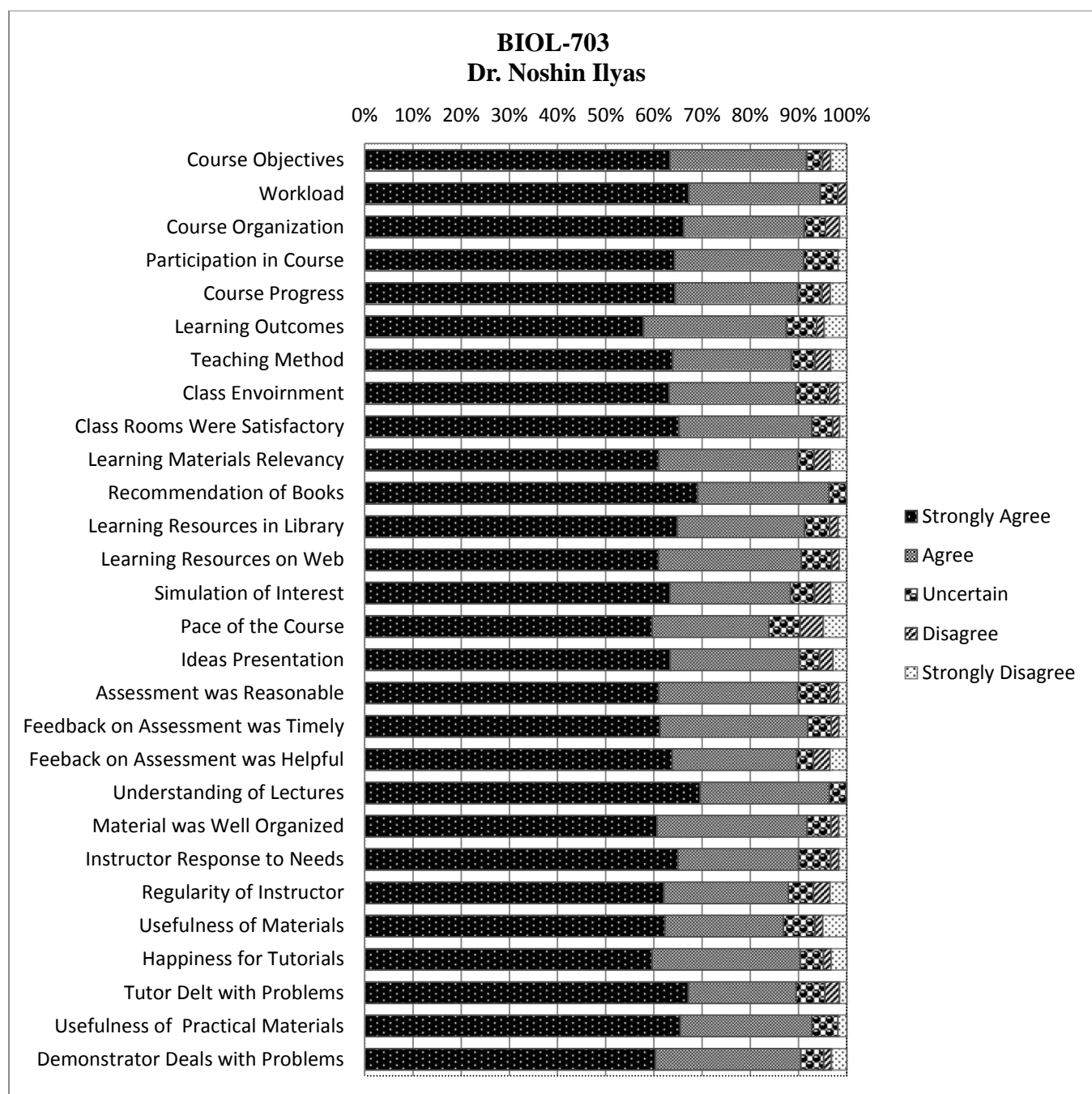
**BIOL-701**  
**Dr. Naveed Iqbal Raja**



**General Comments of the Students about this Course**

**Weaknesses:** Students indicated less satisfaction about learning materials' relevancy.

**Strengths:** The tutor showed reliable attitude. Teacher established progress in this course and covered it with useful materials in the course subjects.

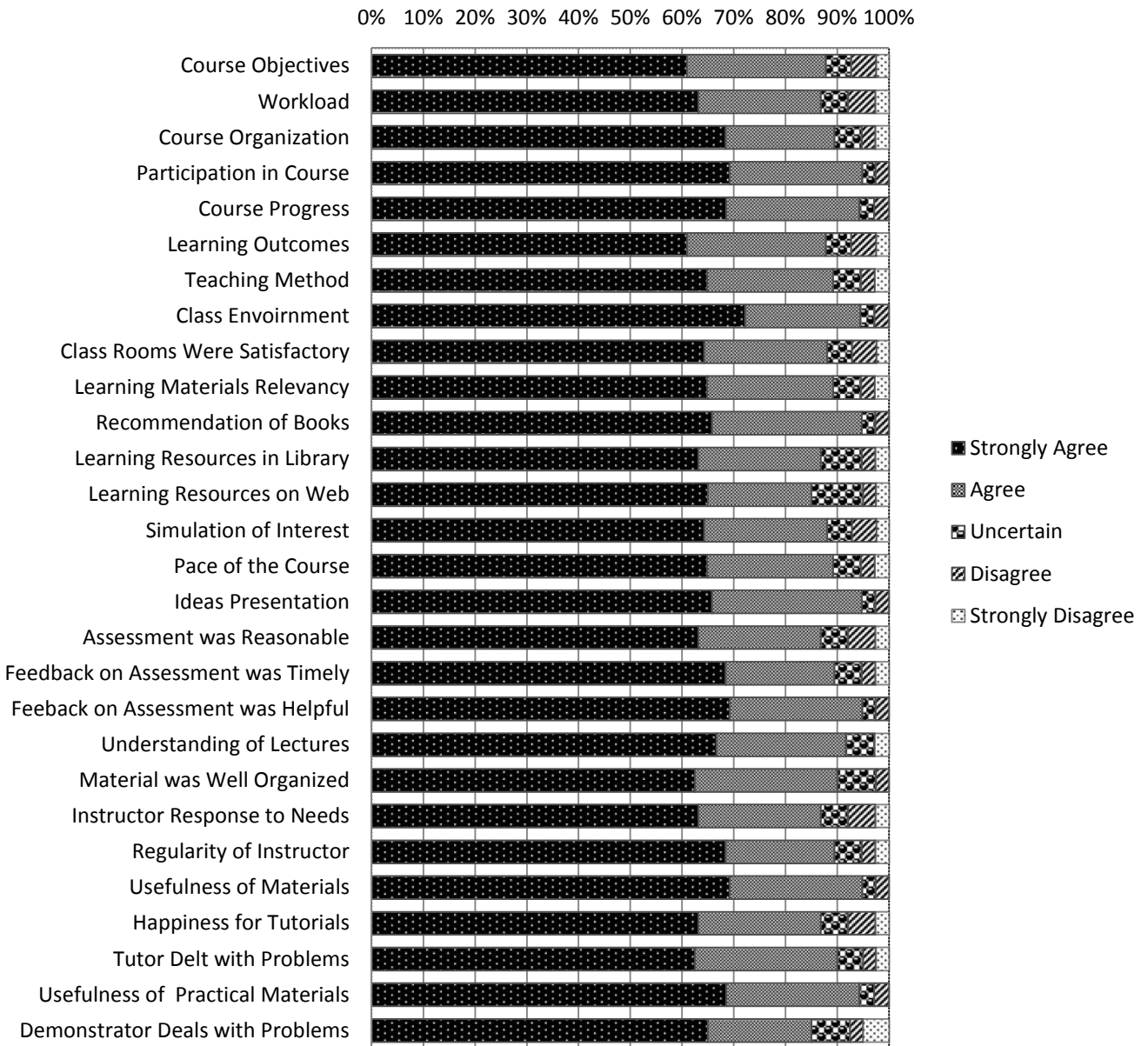


### General Comments of the Students about this Course

**Weaknesses:** Students have not indicated any significant weakness in this course.

**Strengths:** The tutor showed composed attitude and established contribution of students in class discussion and included recent materials in the course subjects. Overall the entire course was satisfactory in almost all regards.

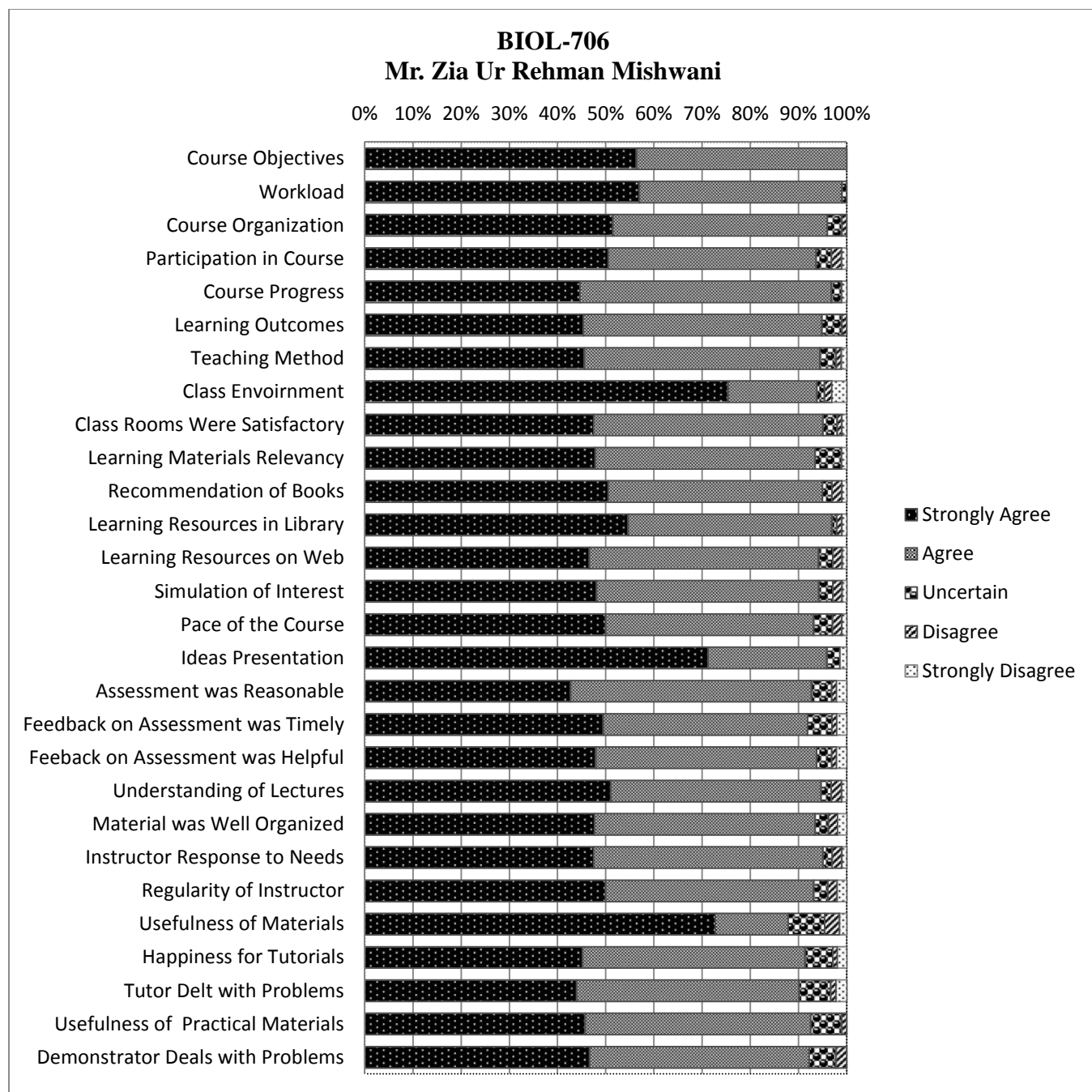
**BIOL-704**  
**Dr. Abida Akram**



**General Comments of the Students about this Course**

**Weaknesses:** workload was not manageable

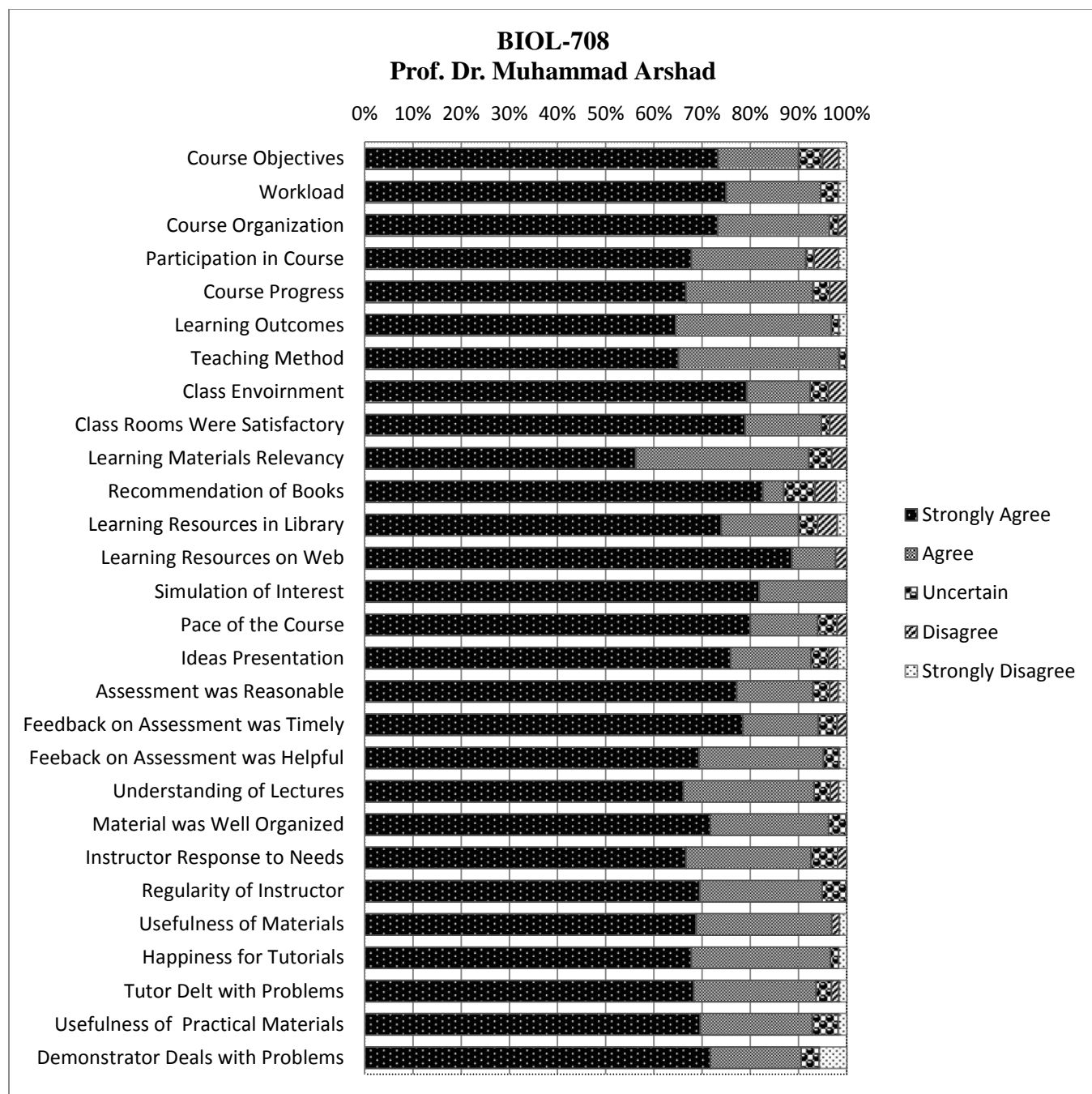
**Strengths:** The tutor showed collected approach and proven support of students in class discussion and included recent materials in the course subjects. Overall the entire course was reasonable.



### General Comments of the Students about this Course

**Weaknesses:** student indicated the heavy workload

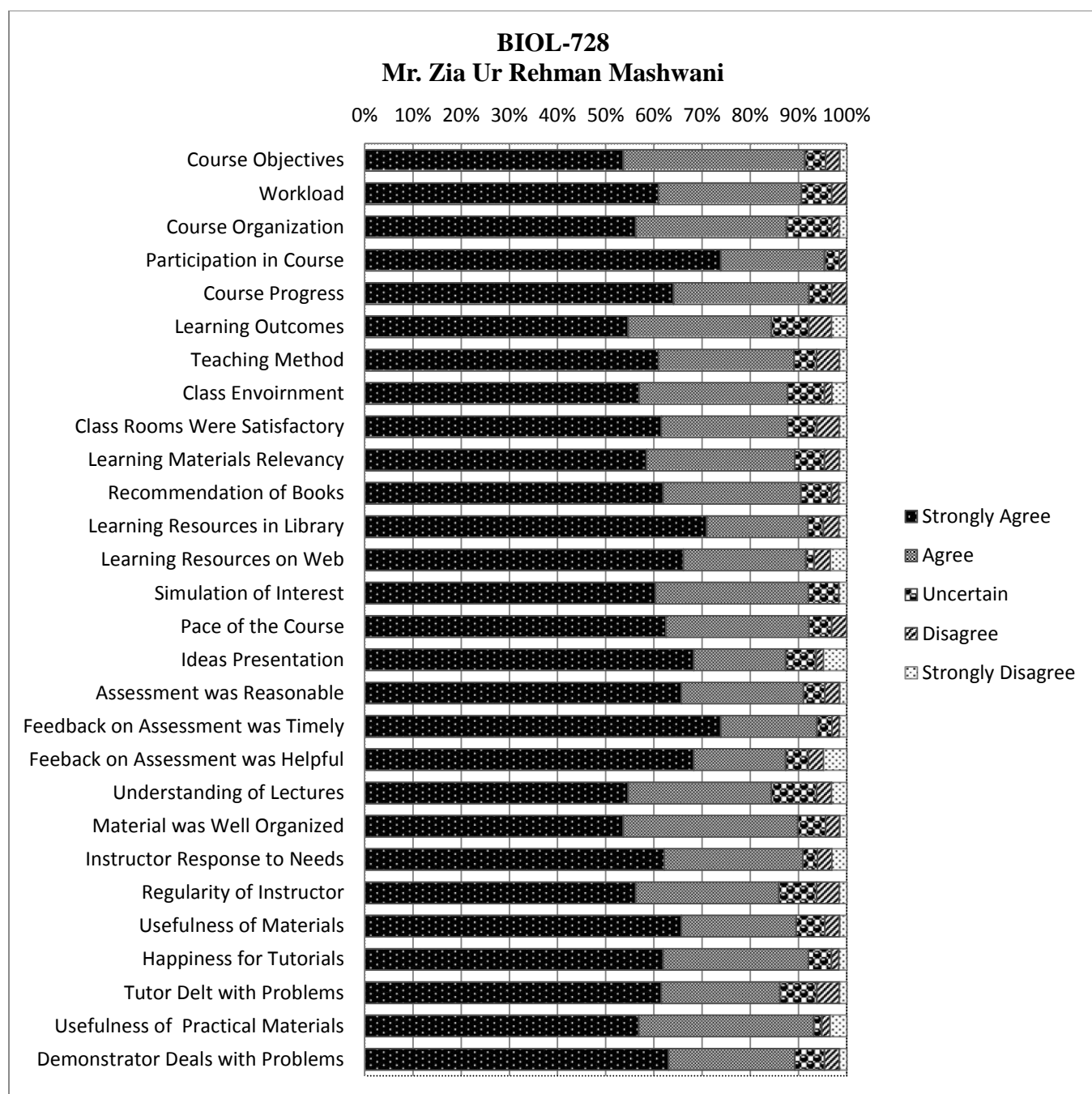
**Strengths:** The tutor showed reasonable attitude and communication skill, established contribution of students in class discussion, included recent materials in the course.



### General Comments of the Students about this Course

**Weaknesses:** No greater weakness was indicated by the students.

**Strengths:** The tutor showed good communication skill, established involvement of students in class discussion, included recent materials in the course

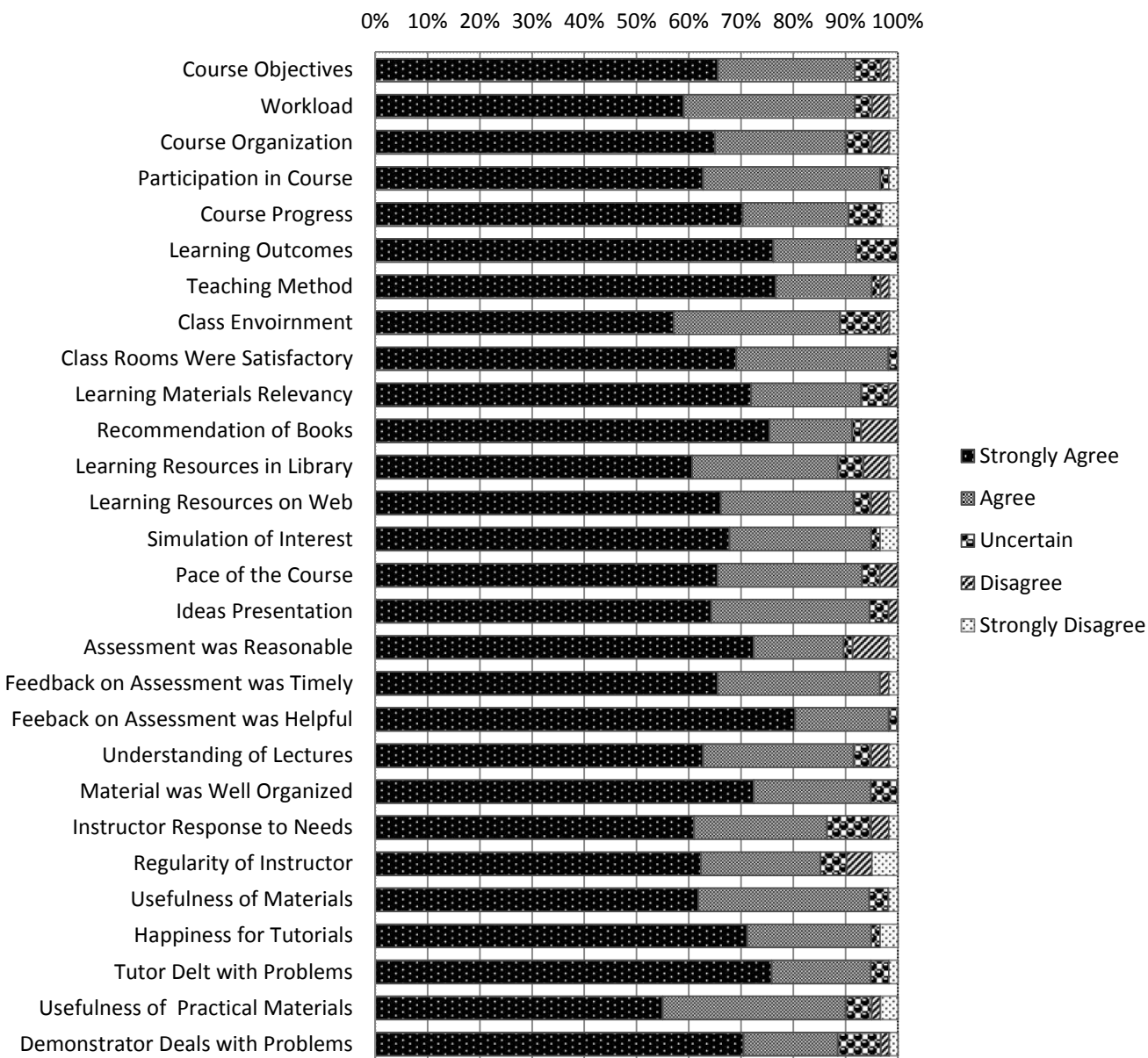


### General Comments of the Students about this Course

**Weaknesses:** Practical need to be strengthen

**Strengths:** The tutor showed balanced attitude and communication skill. Established participation of students in class discussion included recent materials in the course subjects.

**BIOL-728**  
**Dr. Naveed Iqbal Raja**



**General Comments of the Students about this Course**

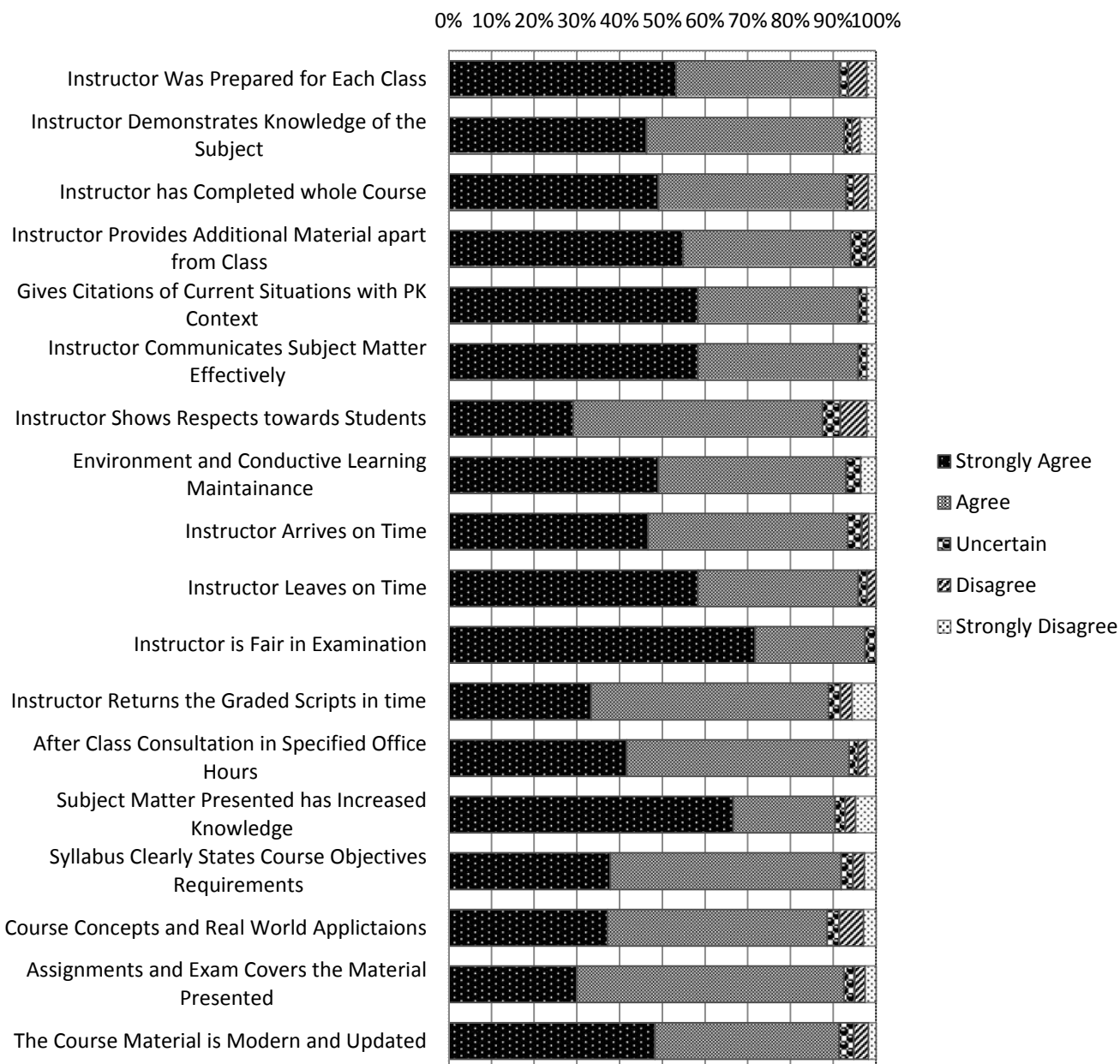
**Weaknesses:** Practical need to be strengthen

**Strengths:** The tutor showed statement skill. Recognized participation of students in class discussion included good practical materials were useful and tried to deal with the difficulties of students.

M. Sc.  
**Teacher Evaluation Questionare**



**BOT-701**  
**Mr. Zia Ur Rehman Mishwani**



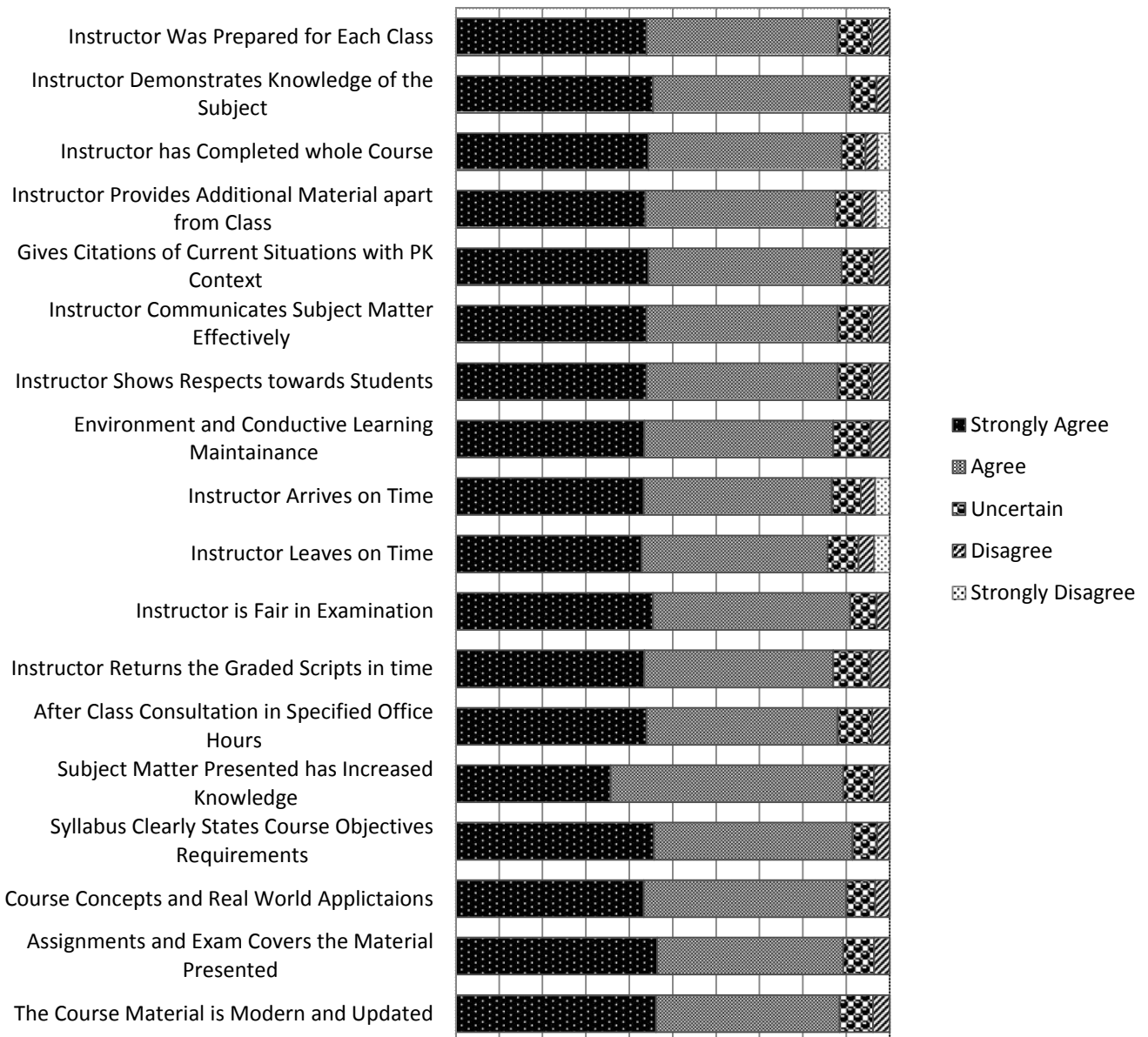
**General Comments of the Students about this Teacher**

**Weaknesses:** The teacher was very strict

**Strengths:** Subject matter was delivered effectively. Examination was fair. Students increased their knowledge.

**BOT-702**  
**Dr. Abdul Waheed**

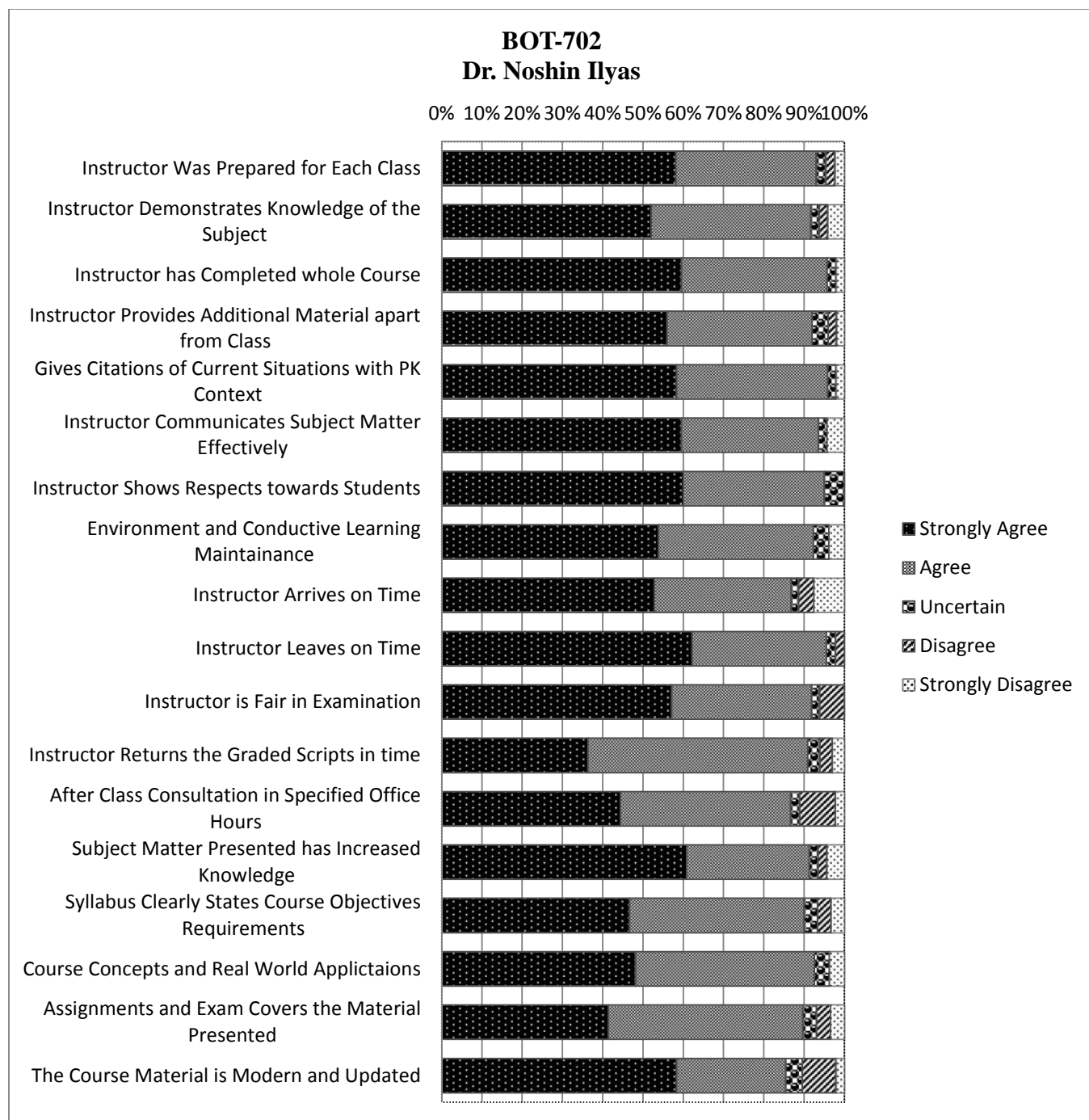
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%



**General Comments of the Students about this Teacher**

**Weaknesses:** Instructor required improving in class timings.

**Strengths:** Majority of the students indicated that instructor was having the knowledge of the course and he has tried to increase the knowledge of the students. Most of the students are agreed with teacher



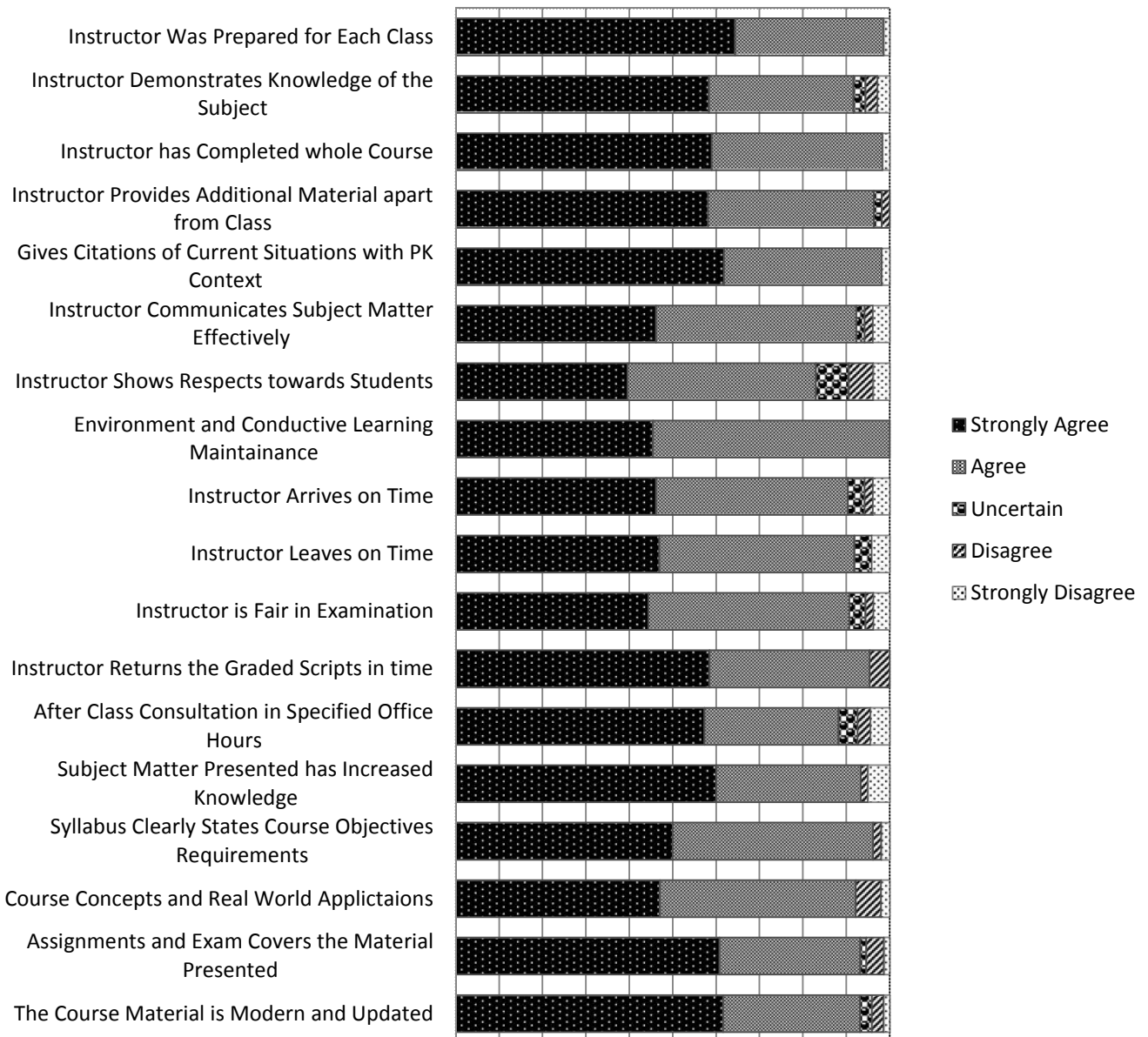
### General Comments of the Students about this Teacher

**Weaknesses:** There was no significant weakness in teacher according to the figure.

**Strengths:** Instructor was prepared for each class and completed the whole course. Instructor has delivered the subject matter effectively.

**BOT-703**  
**Dr. Naveed Iqbal Raja**

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

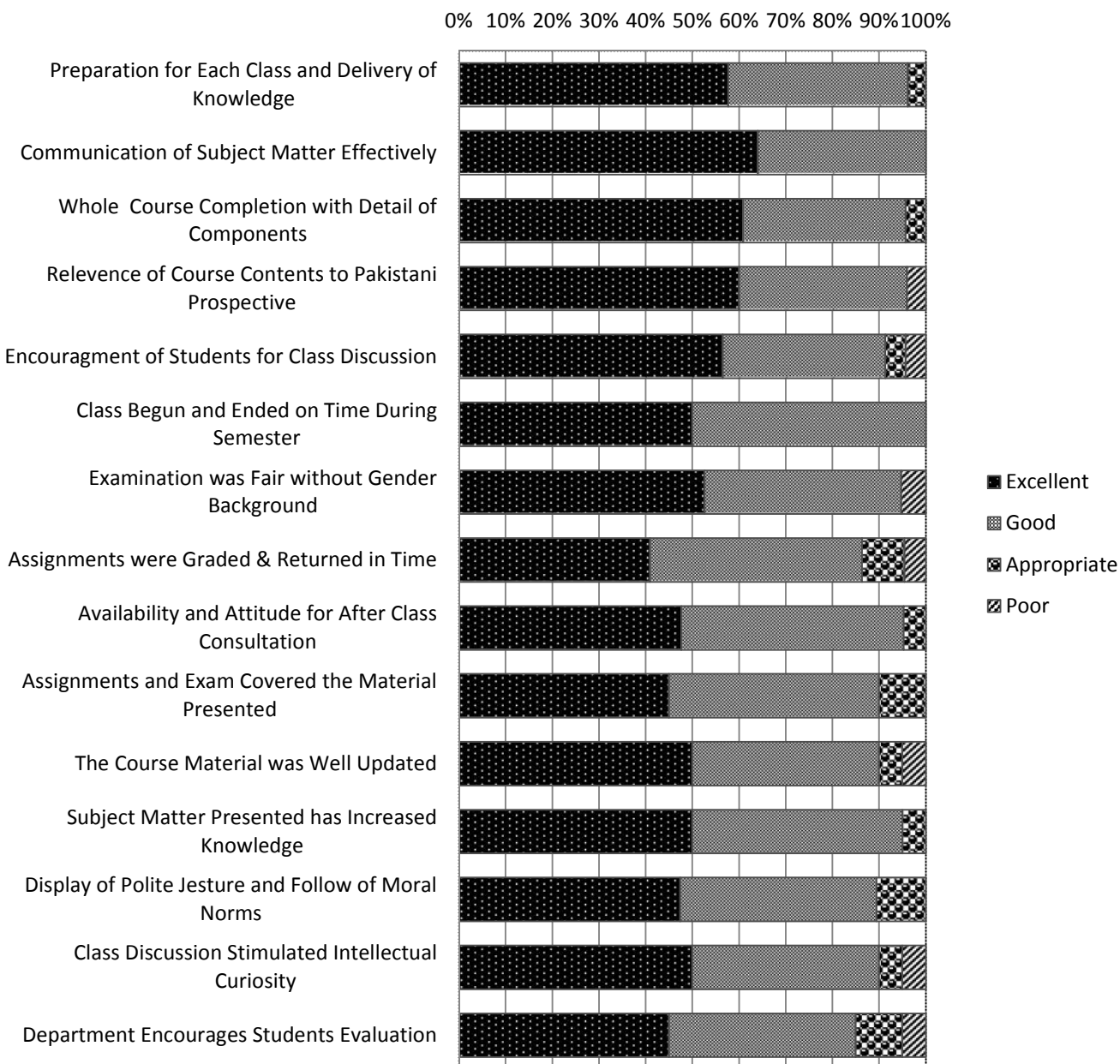


**General Comments of the Students about this Teacher**

**Weaknesses:** Instructor should less strict to the students.

**Strengths:** Instructor has provided additional materials. Environment was conducive in class and students have increased their knowledge. #

**BOT-704**  
**Prof. Dr. Muhammad Arshad**

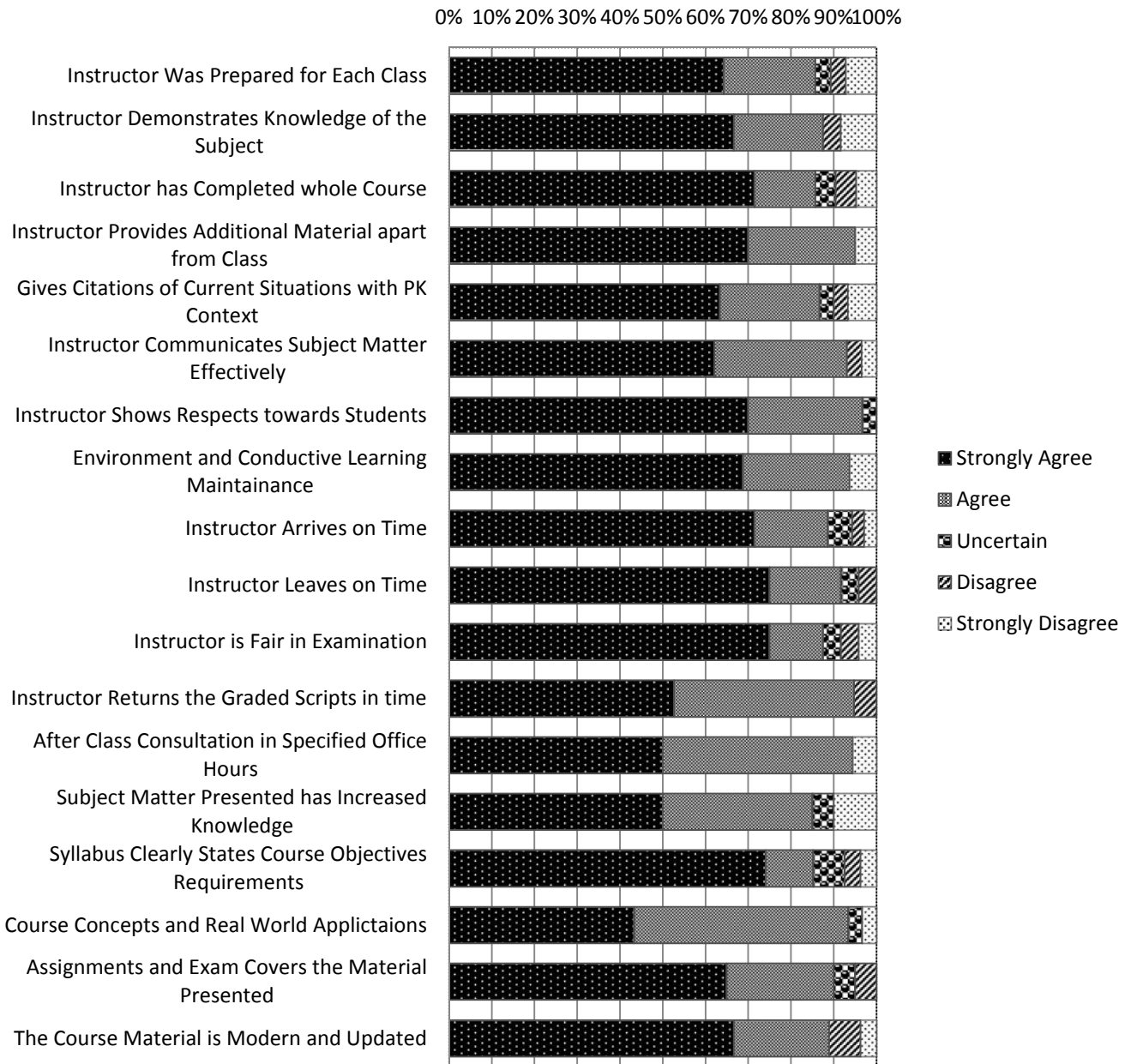


**General Comments of the Students about this Teacher**

**Weaknesses:** No weakness is mentioned by the students

**Strengths:** Instructor presented the subject matter effectively and completed the whole course. Regularity was excellent. Examination was fair and students have increased their knowledge.

**BOT-705**  
**Dr. Muhammad Arshad**

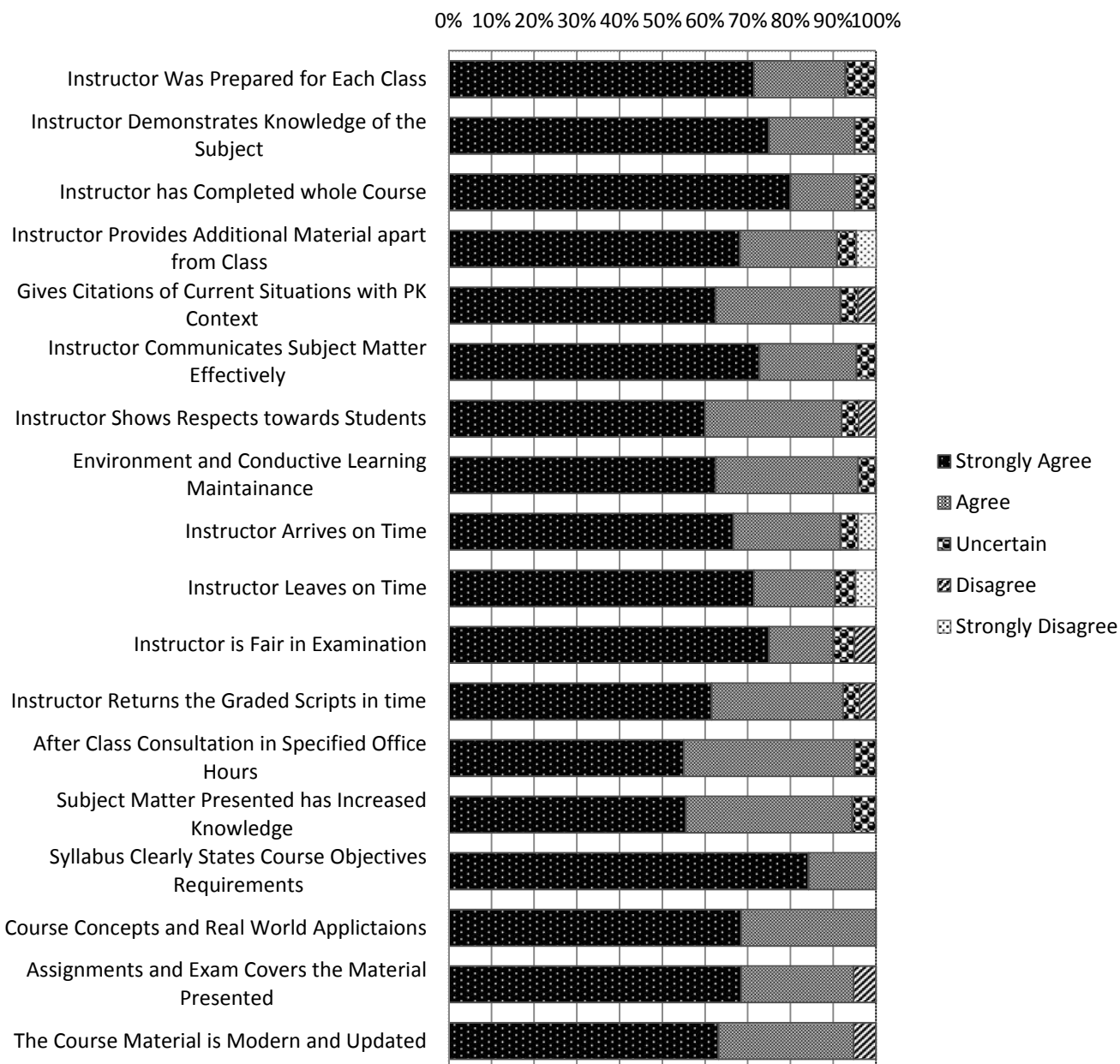


**General Comments of the Students about this Teacher**

**Weaknesses:** No weakness is mentioned by the students

**Strengths:** Instructor presented the subject matter effectively and completed the whole course. Regularity was excellent. Examination was fair and students have increased their knowledge.

**BOT-706**  
**Mr. Zia Ur Rehman Mishwani**



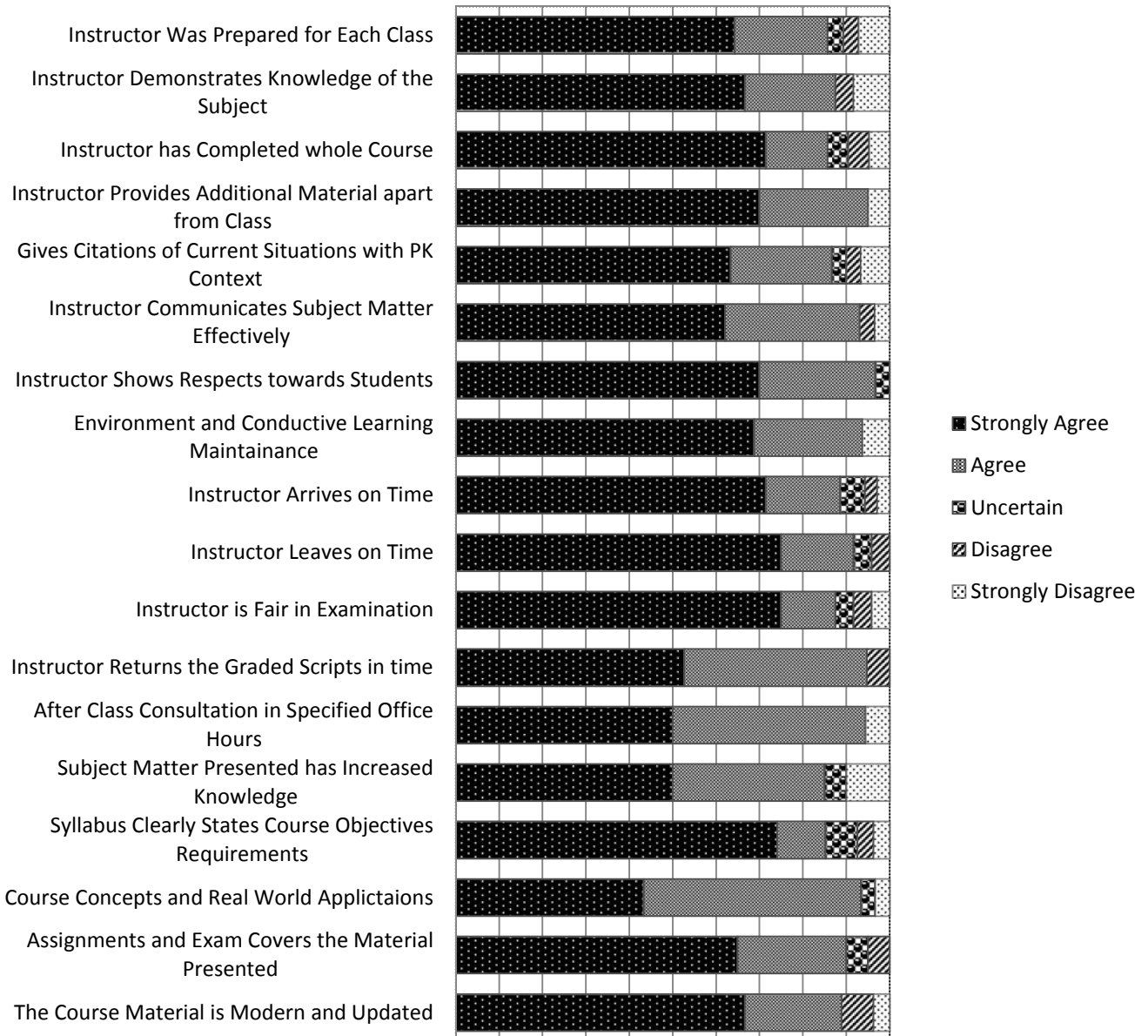
**General Comments of the Students about this Teacher**

**Weaknesses:** teacher was strict in grading

**Strengths:** Instructor provided the additional materials and has communicated the subject matter. Showed respect to the students and was available for after class consultation. Most of the students are agreed with teacher

**BOT-707**  
**Dr. Noshin Ilyas**

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%



**General Comments of the Students about this Teacher**

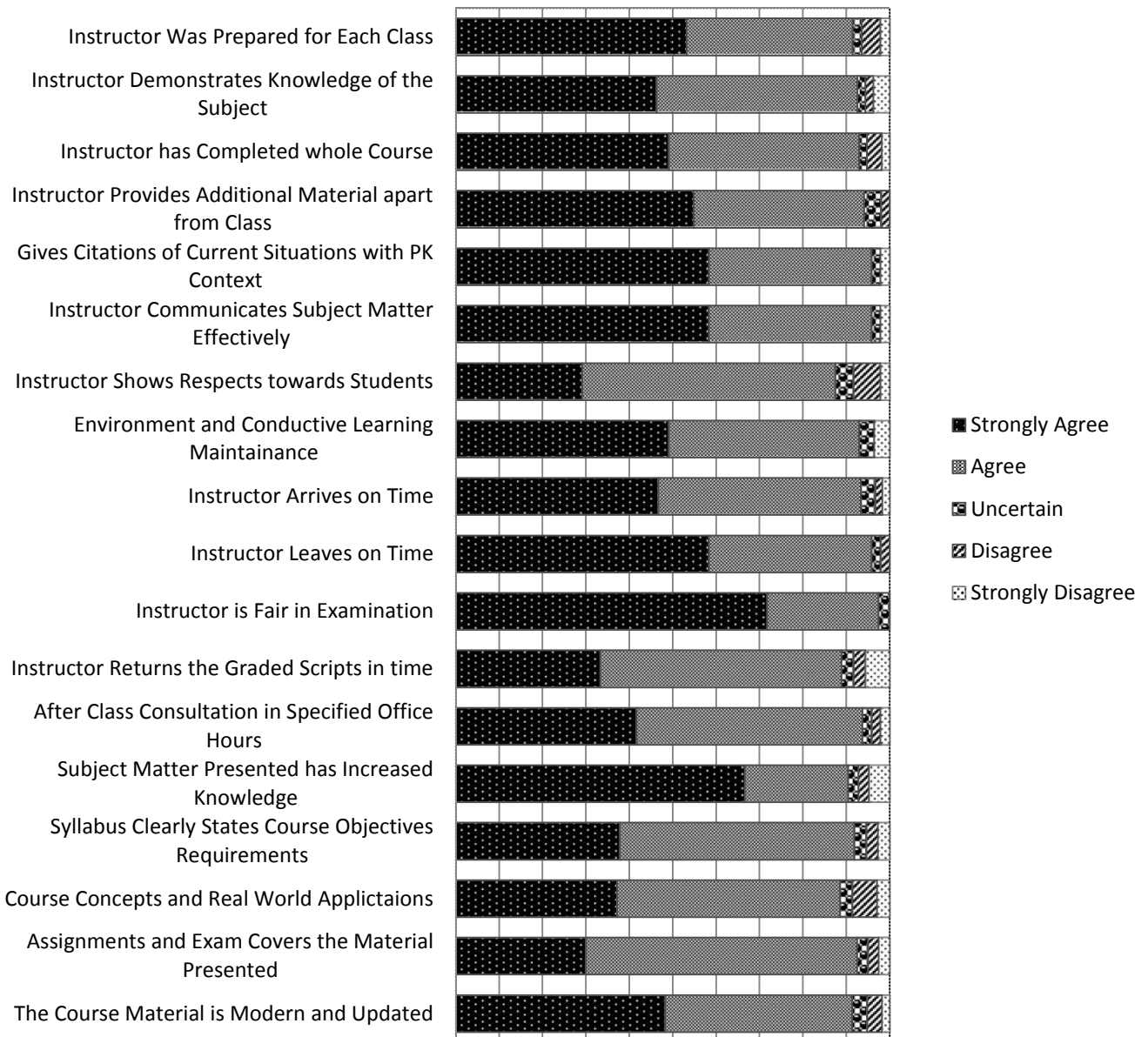
**Weaknesses:** Instructor needed to improve in subject matter performance

**Strengths:** Instructor provided the additional materials and has communicated the subject matter. Showed respect to the students and was available for after class consultation



**BOT-708**  
**Dr. Abida Akram**

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

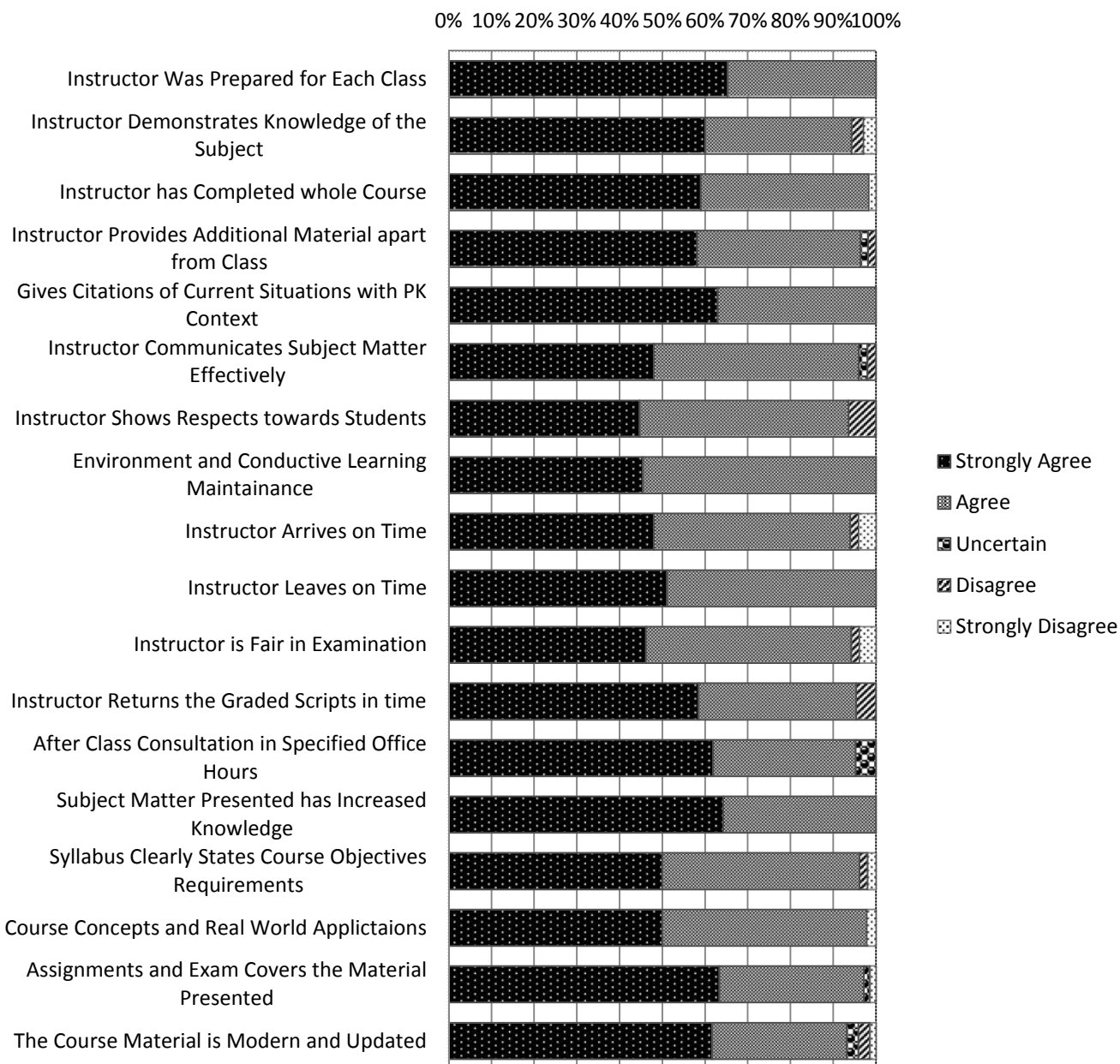


**General Comments of the Students about this Teacher**

**Weaknesses:** No specific weakness was indicated except the return of graded scripts in time.

**Strengths:** Instructor presented the subject matter effectively and completed the whole course. Regularity was excellent. Examination was fair and students have increased their knowledge.

**BOT-709**  
**Prof. Dr. Muhammad Arshad**

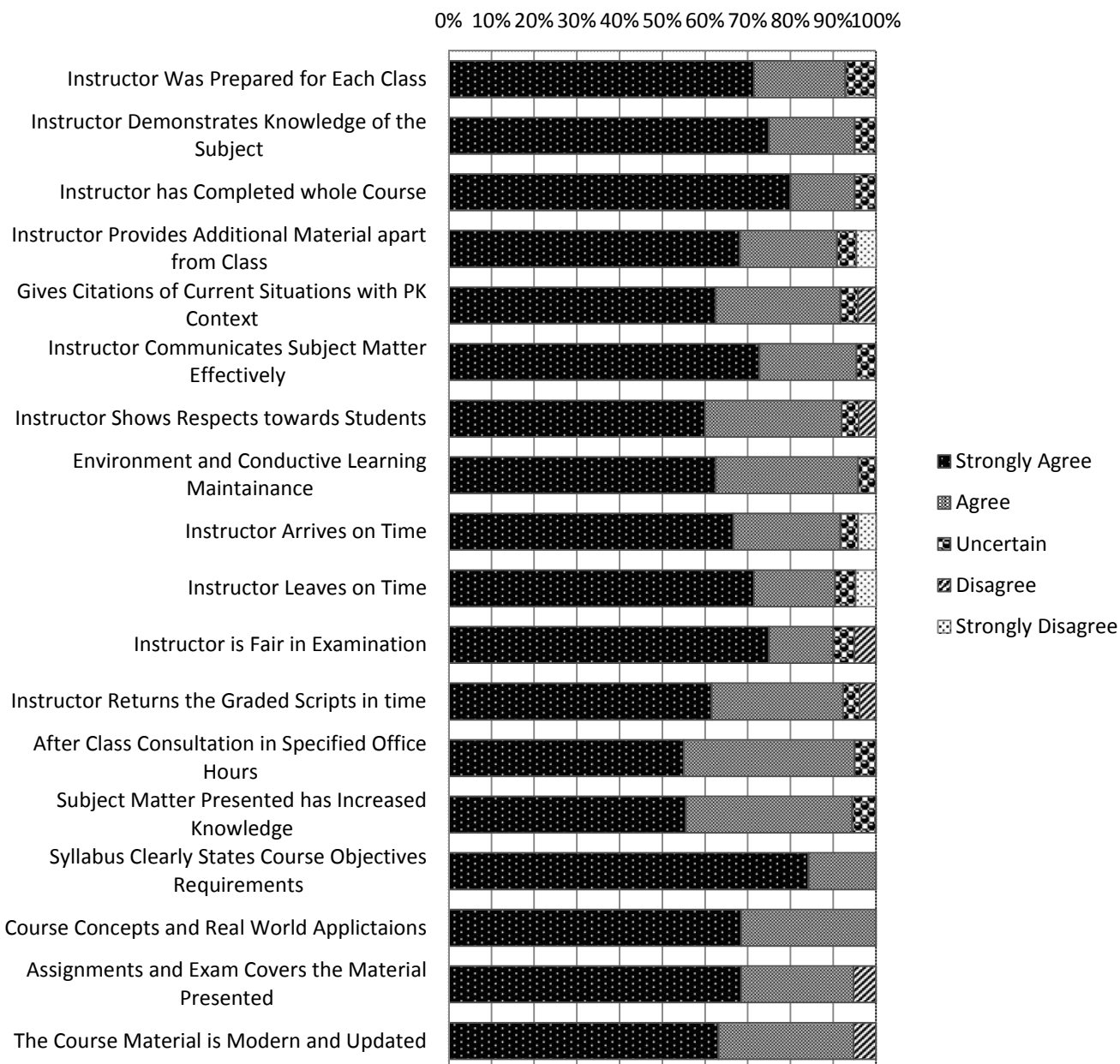


**General Comments of the Students about this Teacher**

**Weaknesses:** No significant weakness was specified by students about this tutor.

**Strengths:** Most of the students were satisfied with teacher and they have confirmed the instructor on all standings.

**BOT-710**  
**Professor Dr. Muhammad Arshad**



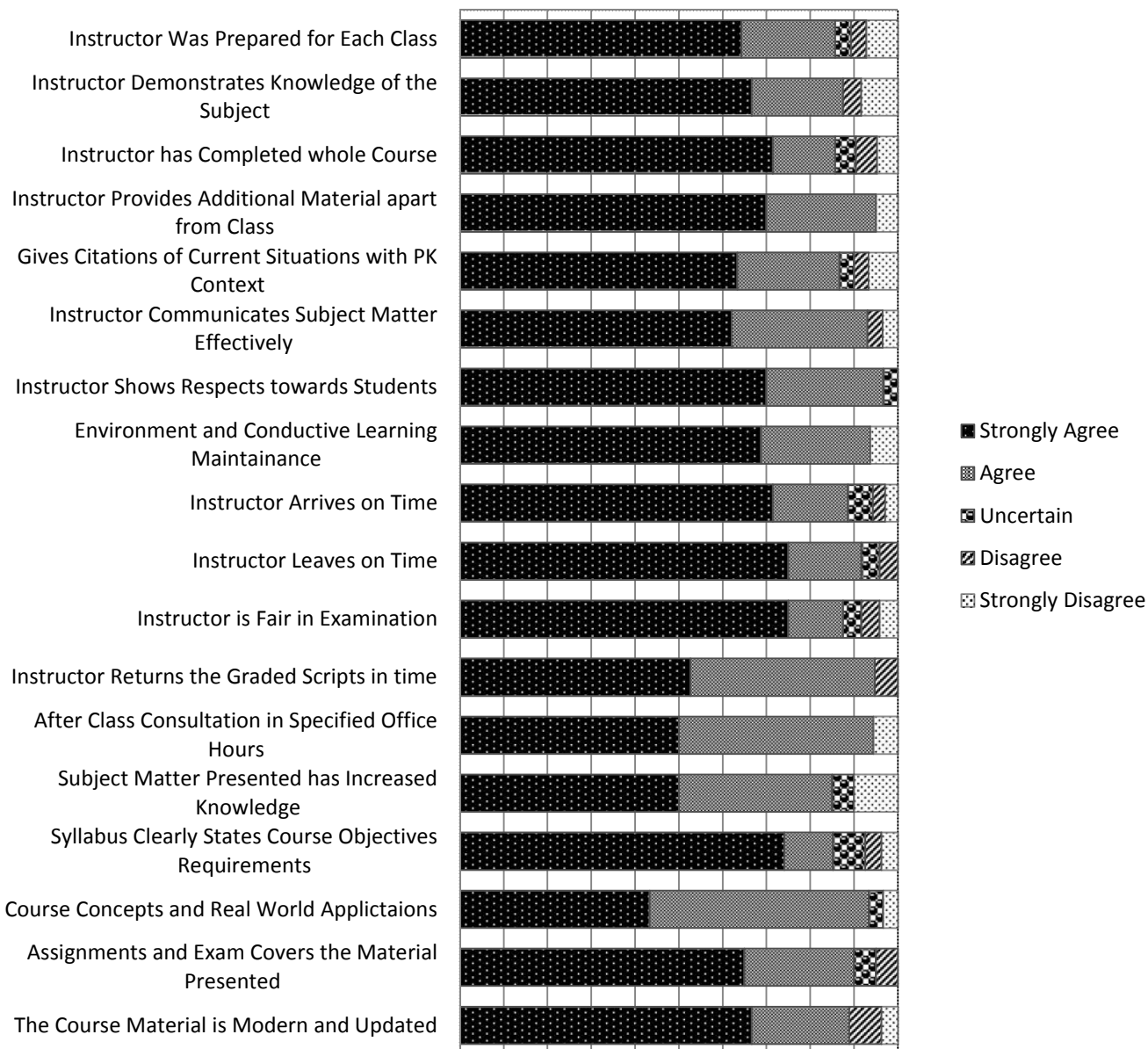
**General Comments of the Students about this Teacher**

**Weaknesses:** Instructor needed to improve in after class consultation.

**Strengths:** Instructor provided the additional materials and has communicated the subject matter. Showed respect to the students and was available for after class consultation. Most of the students are satisfied with instructor.

**BOT-711**  
**Ms. Saira Asif**

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

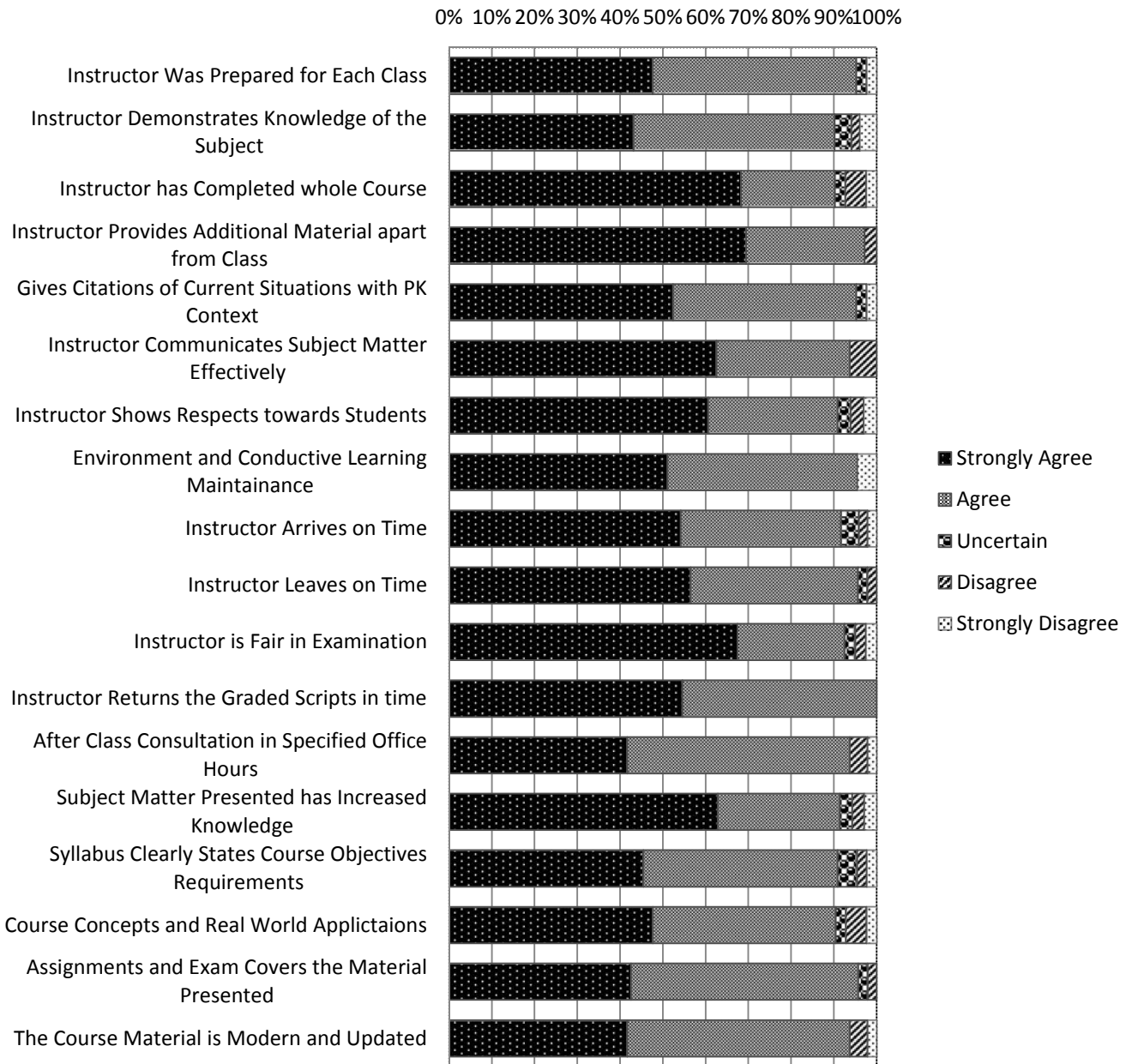


**General Comments of the Students about this Teacher**

**Weaknesses:** Instructor needed to improve is subject matter presentation.

**Strengths:** Instructor provided the additional materials and has communicated the subject matter. Showed respect to the students and was available for after class consultation.

**BOT-712**  
**Dr. Rehmatullah Qureshi**

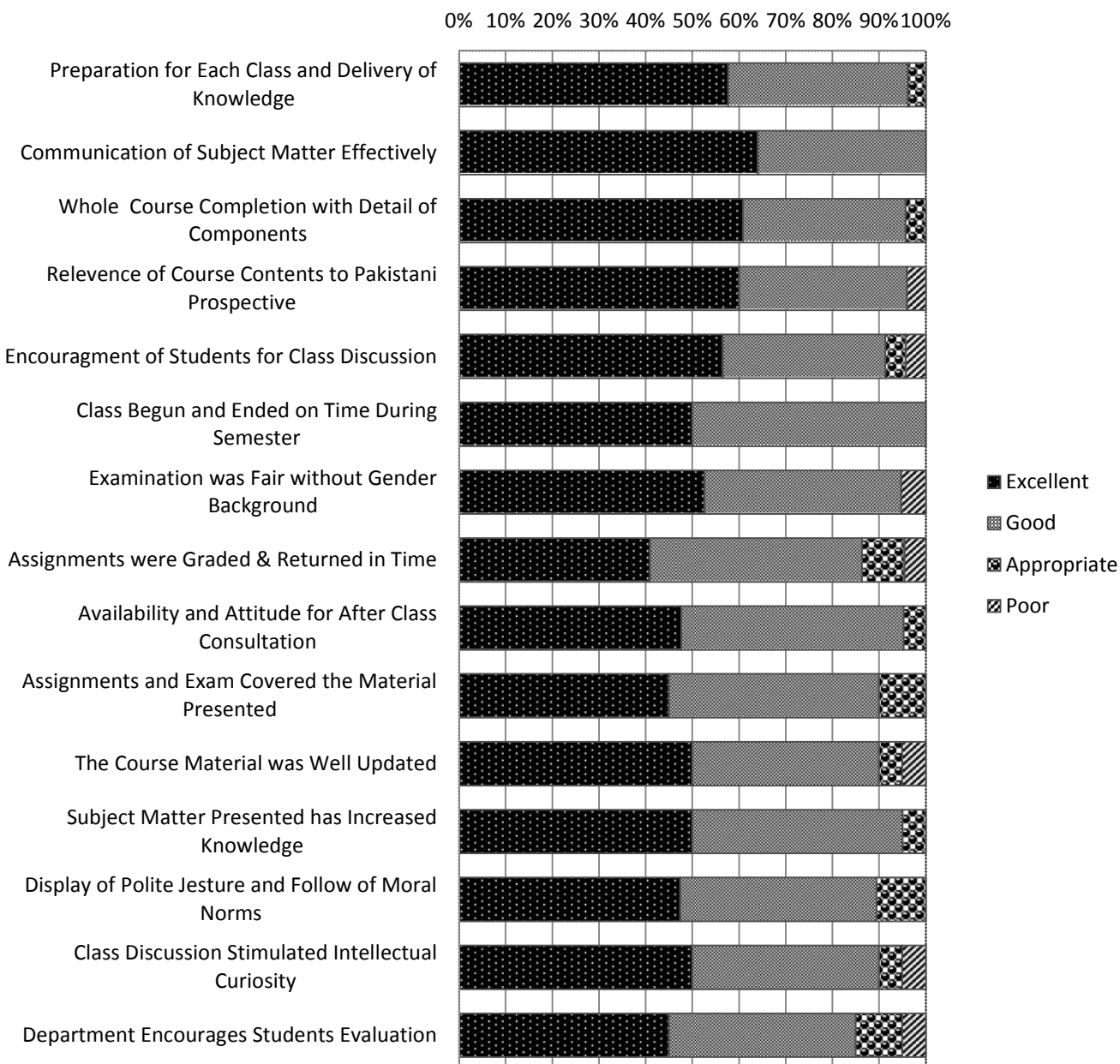


**General Comments of the Students about this Teacher**

**Weaknesses:** Graph shows no greater weakness about teacher.

**Strengths:** Instructor presented the subject matter effectively and completed the whole course. Regularity was excellent. Examination was fair and students have increased their knowledge.

**BOT-713**  
**Prof. Dr. Muhammad Arshad**



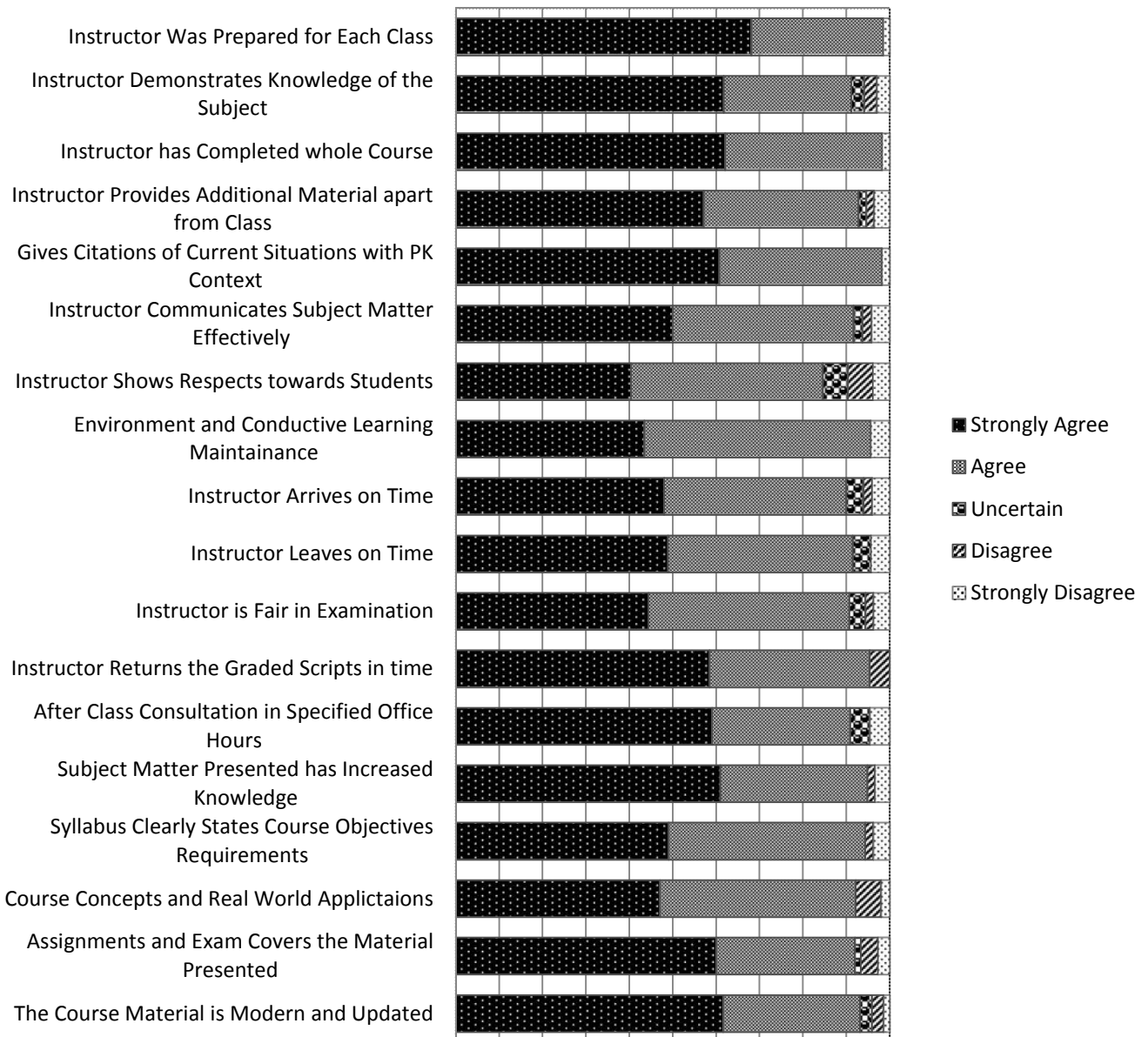
**General Comments of the Students about this Teacher**

**Weaknesses:** No weakness is mentioned by the students

**Strengths:** Instructor presented the subject matter effectively and completed the whole course. Regularity was excellent.

**BOT-718**  
**Dr. Yamin Bibi**

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

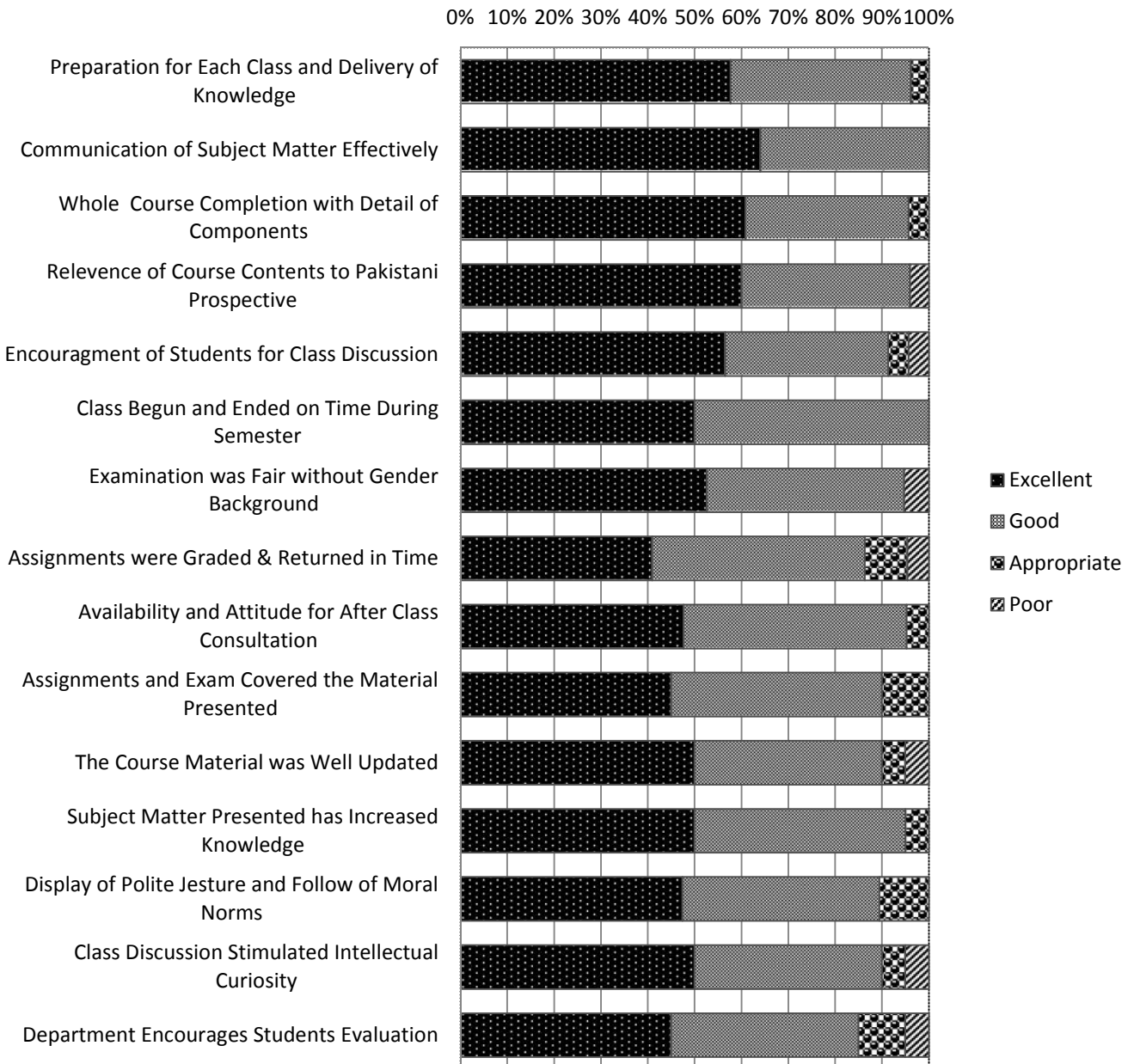


**General Comments of the Students about this Teacher**

**Weaknesses:** Instructor needed to less strict with students.

**Strengths:** Instructor presented the subject matter effectively and completed the whole course.

**BOT-727**  
**Dr. Noshin Ilyas**



**General Comments of the Students about this Teacher**

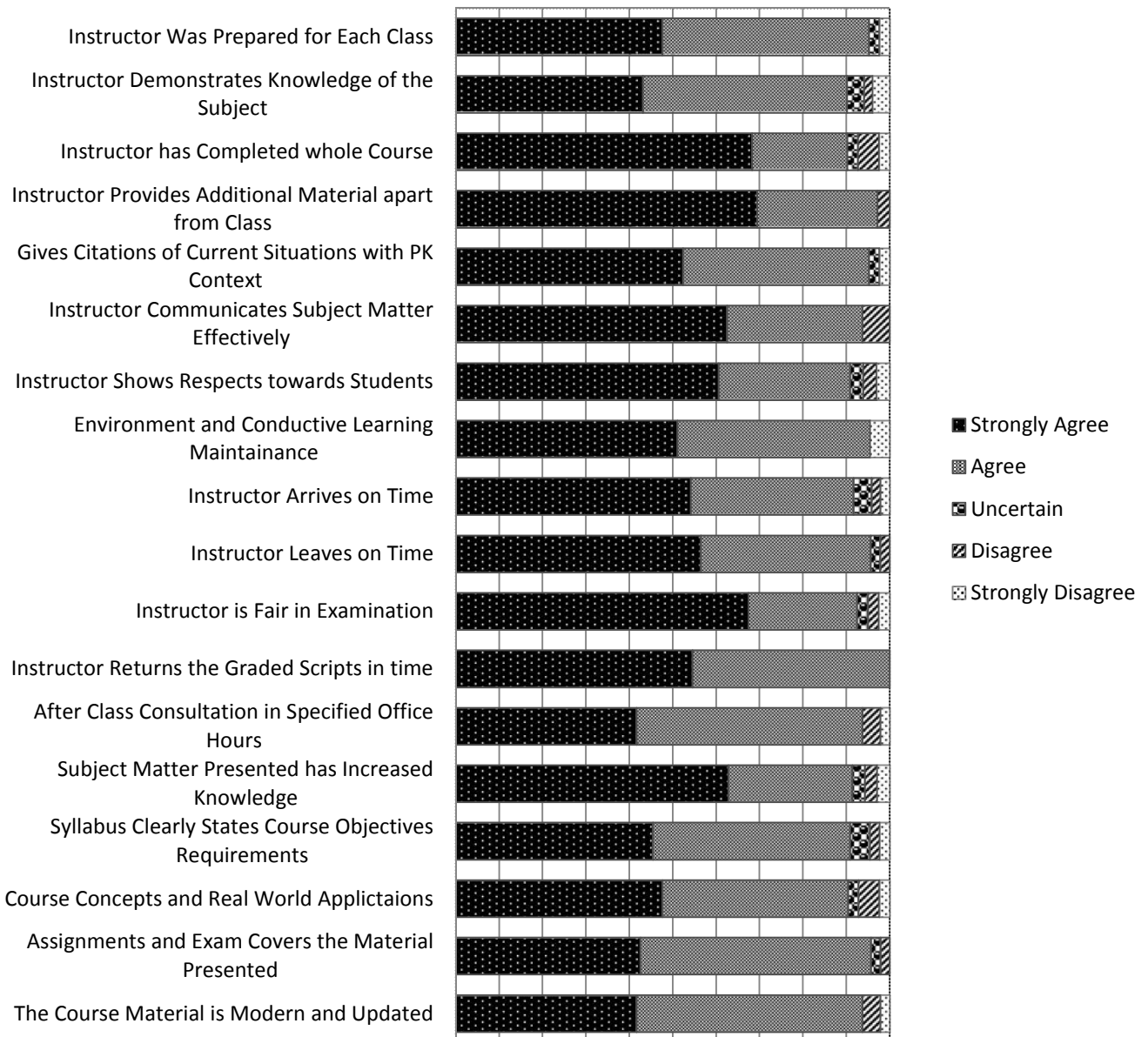
**Weaknesses:** Practical may be incorporated in the course

**Strengths:** Instructor presented the subject matter effectively. Examination was fair and students have increased their knowledge.



**BOT-728**  
**Dr. Naveed Iqbal Raja**

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

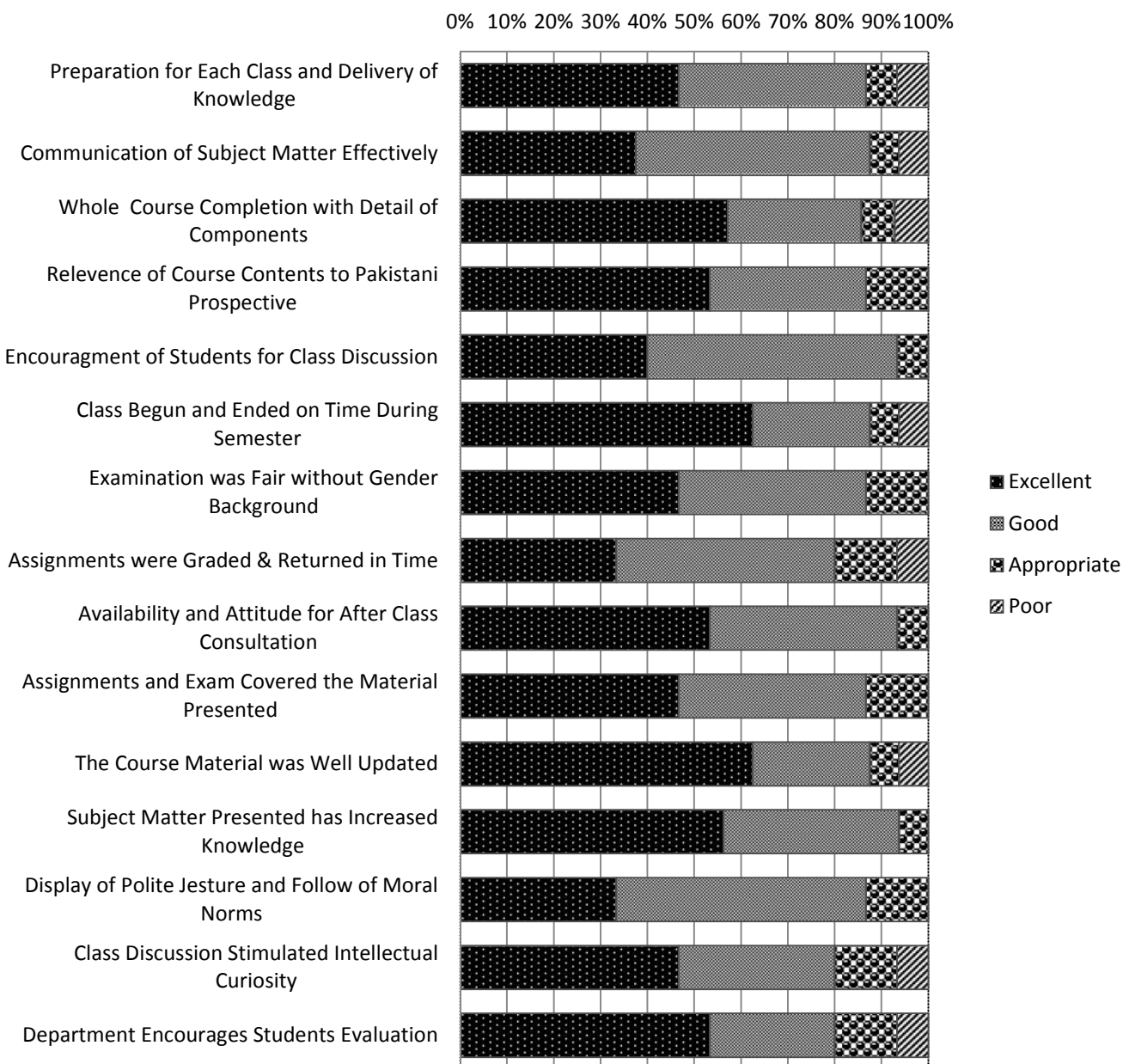


**General Comments of the Students about this Teacher**

**Weaknesses:** Teacher did not cited current situation

**Strengths:** Regularity was excellent. Examination was fair and students have increased their knowledge. Most of the students are agreed with teacher

**BOT-731**  
**Mr. Zia Ur Rehman Mashwani**



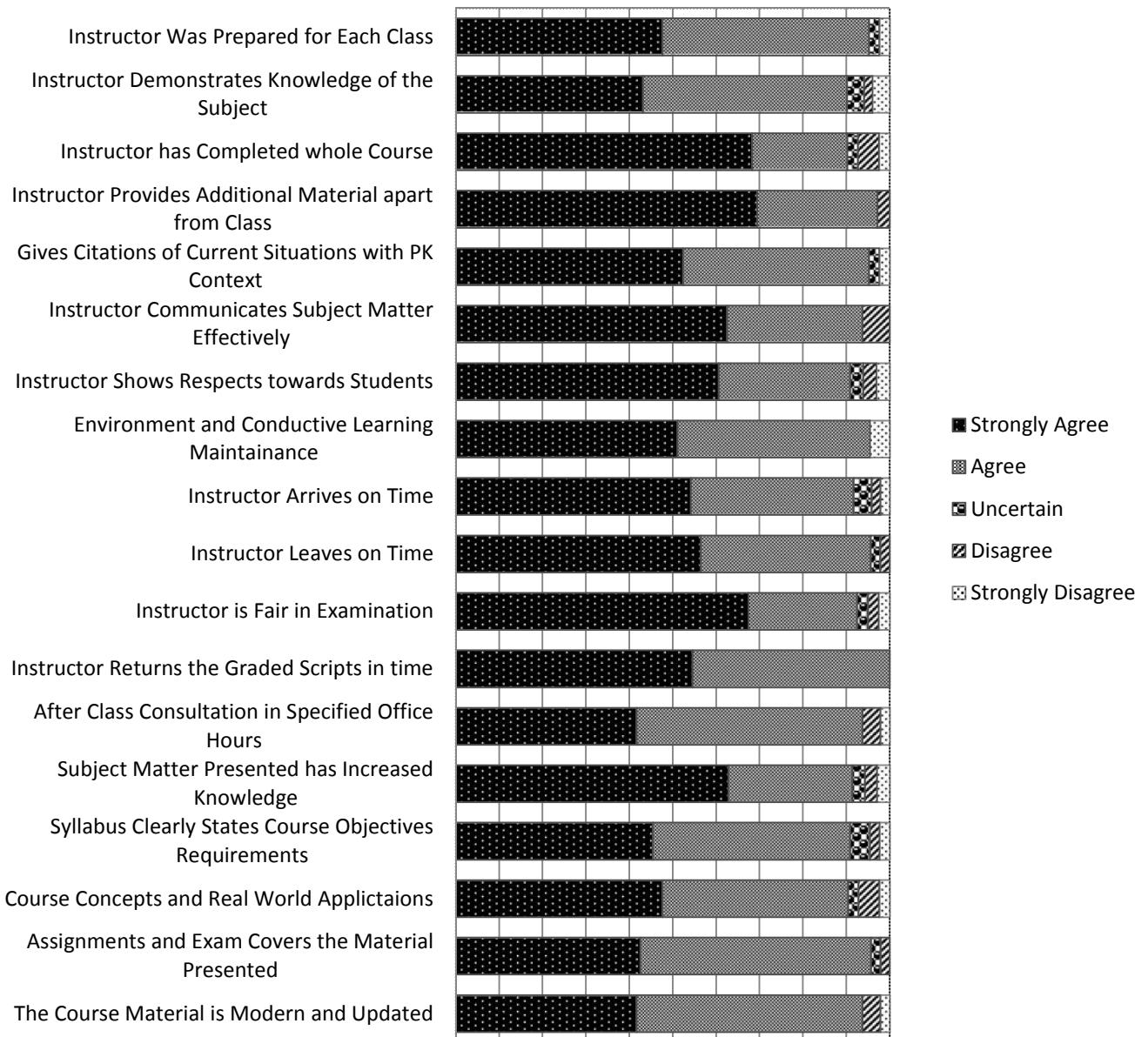
**General Comments of the Students about this Teacher**

**Weaknesses:** Instructor required improving graded scripts

**Strengths:** Majority of the students indicated that instructor was having the knowledge of the course and he has tried to increase the knowledge of the students.

**BOT-736**  
**Dr. Yamin Bibi**

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

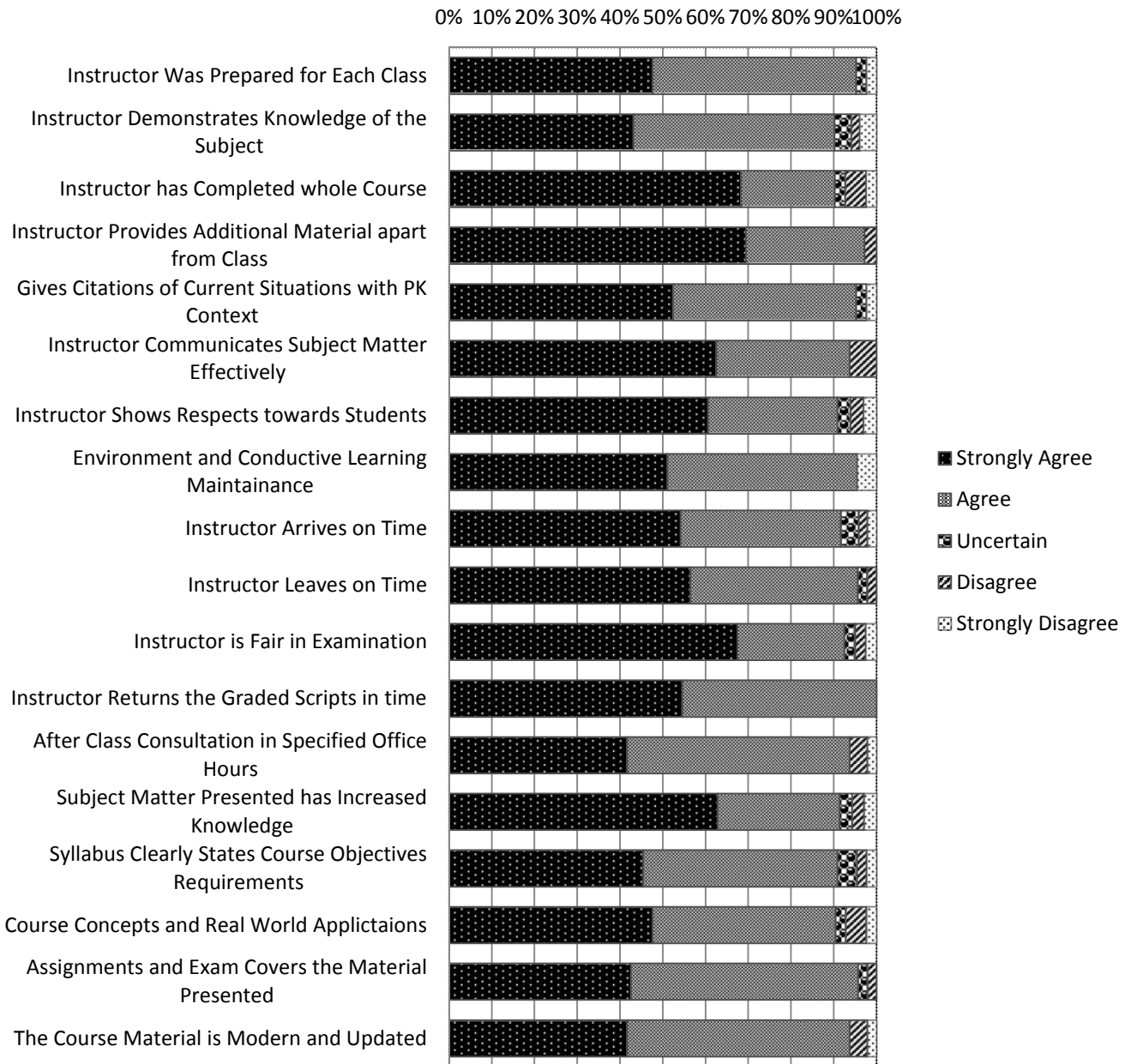


**General Comments of the Students about this Teacher**

**Weaknesses:** There was no weakness about this teacher indicated by students.

**Strengths:** Instructor presented the subject matter effectively and completed the whole course. Regularity was excellent. Examination was fair and students have increased their knowledge.

**BOT-737**  
**Dr. Rehmatullah Qureshi**



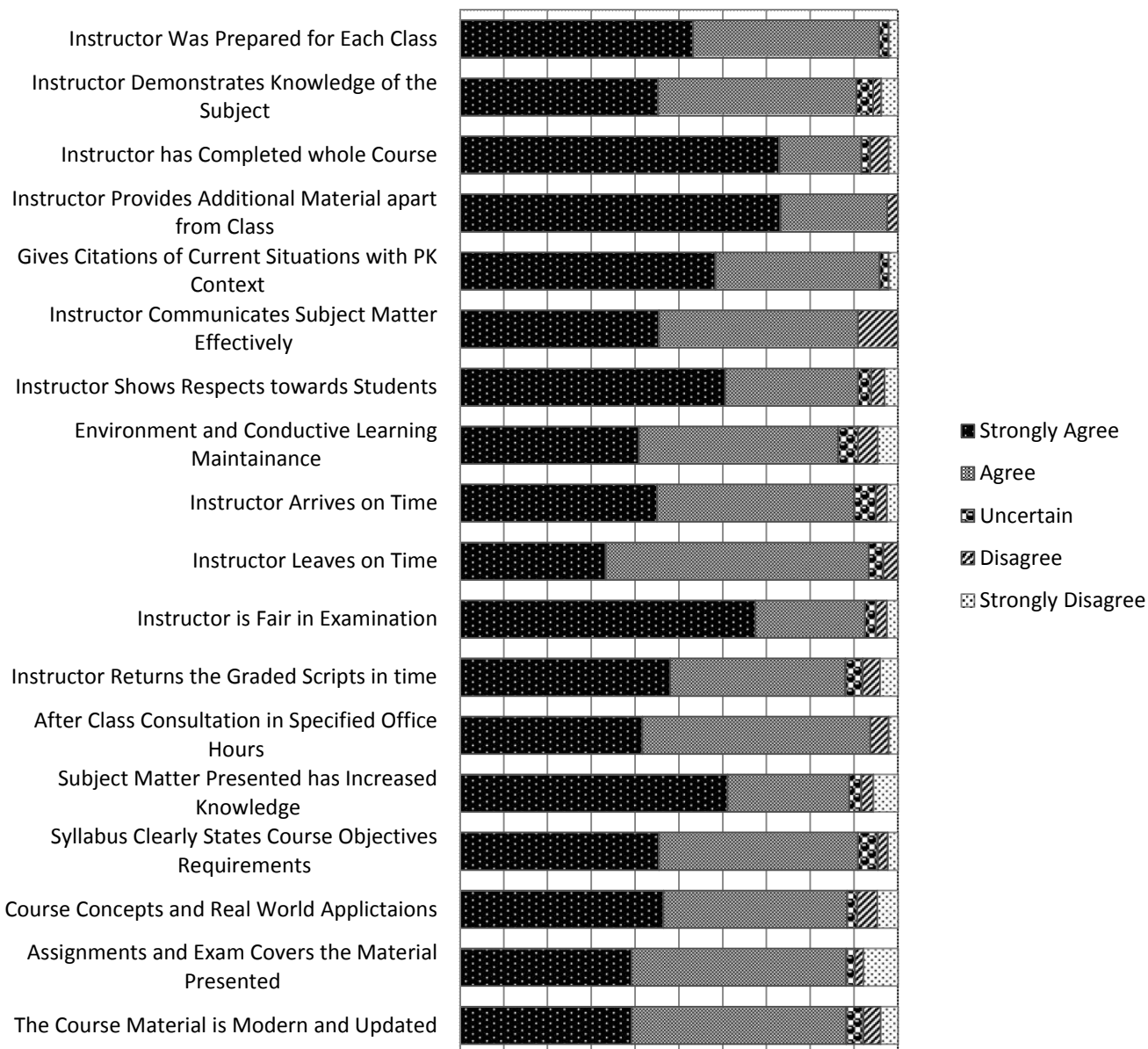
**General Comments of the Students about this Teacher**

**Weaknesses:** Course material require updation

**Strengths:** Instructor presented the subject matter effectively and completed the whole course. Regularity was excellent. Examination was fair and students have increased their knowledge.

**BIOL-701**  
**Dr. Naveed Iqbal Raja**

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%



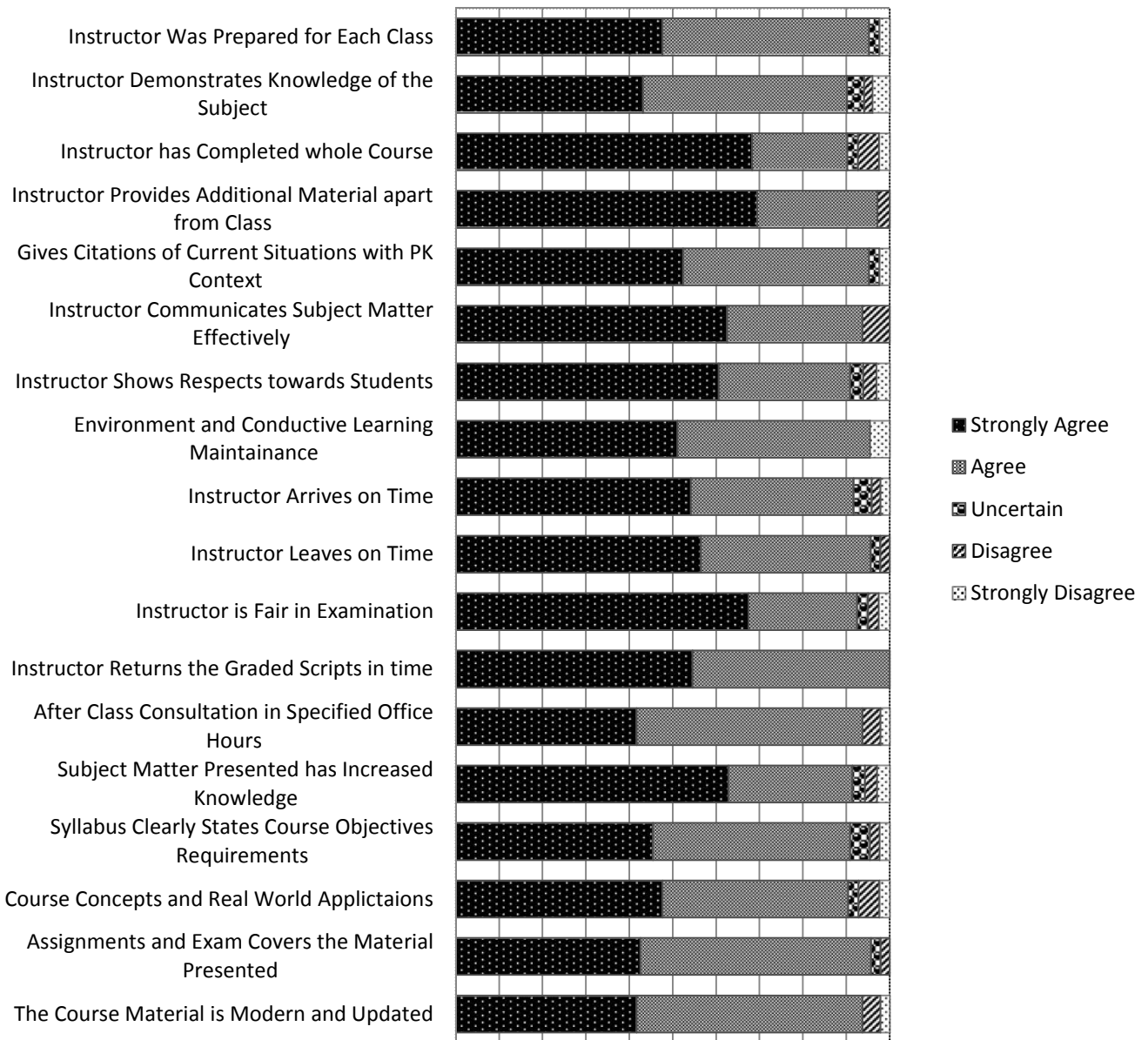
**General Comments of the Students about this Teacher**

**Weaknesses:** Some students indicated to improve class environment.

**Strengths:** Instructor presented the subject matter effectively and completed the whole course. Regularity was excellent. Examination was fair and students have increased their knowledge.

**BIOL-703**  
**Dr. Noshin Ilyas**

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%



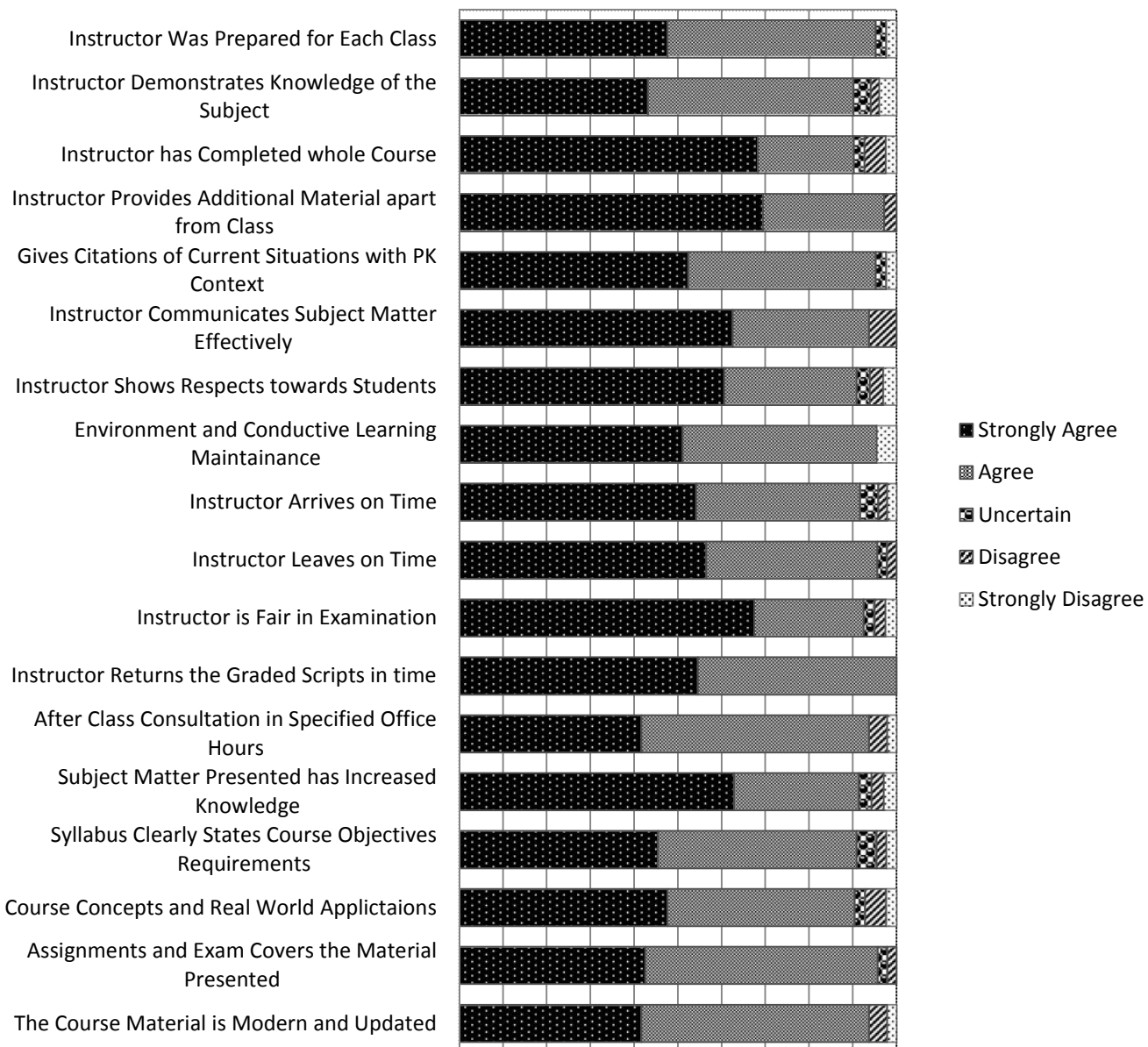
**General Comments of the Students about this Teacher**

**Weaknesses:** Lengthy course material

**Strengths:** Instructor presented the subject matter effectively and completed the whole course. Regularity was excellent.

**BIOL-704**  
**Dr. Abida Akram**

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

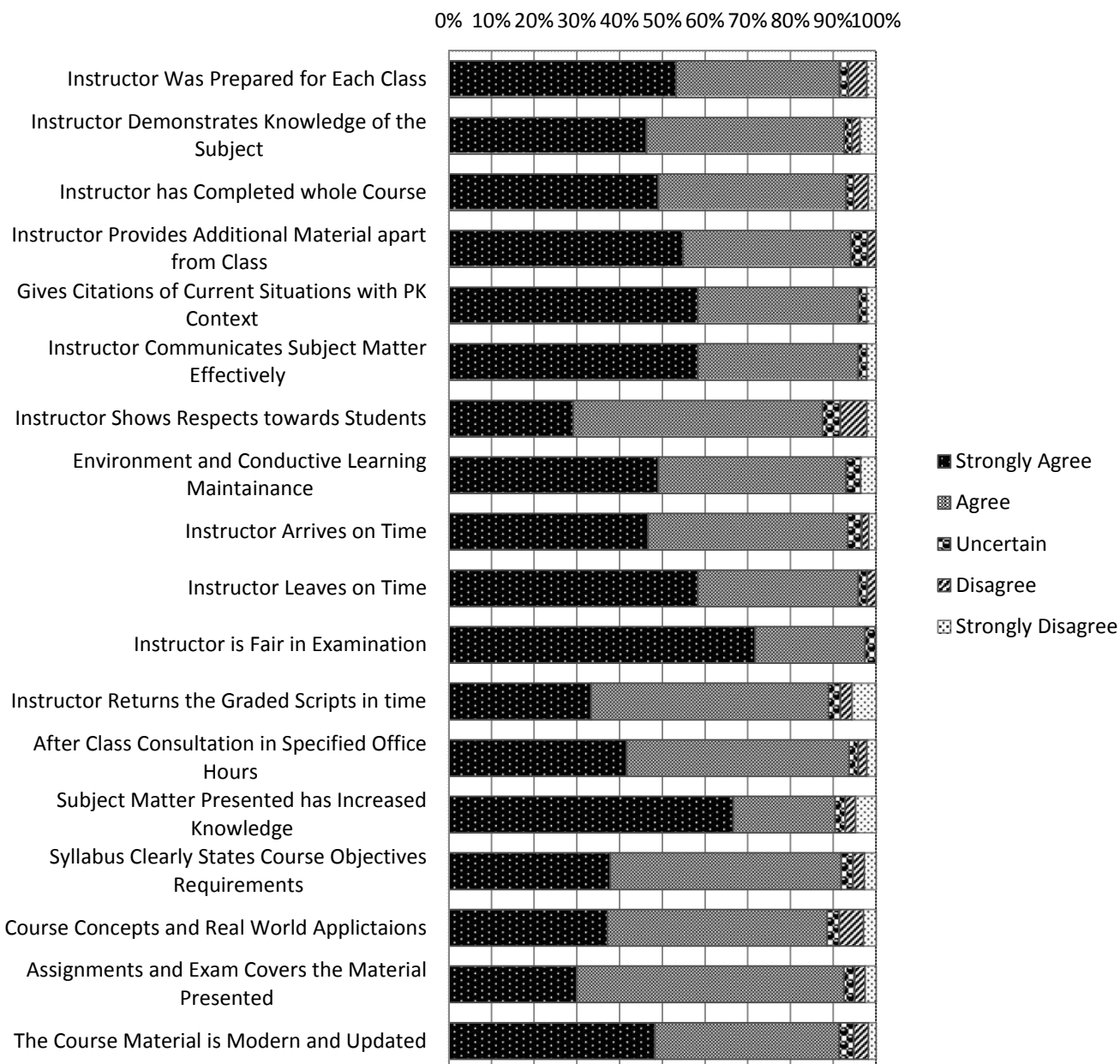


**General Comments of the Students about this Teacher**

**Weaknesses:** Course material not modern and updated

**Strengths:** Examination was fair and students have increased their knowledge. Most of the students are satisfied with teacher

**BIOL-706**  
**Mr. Zia Ur Rehman Mishwani**

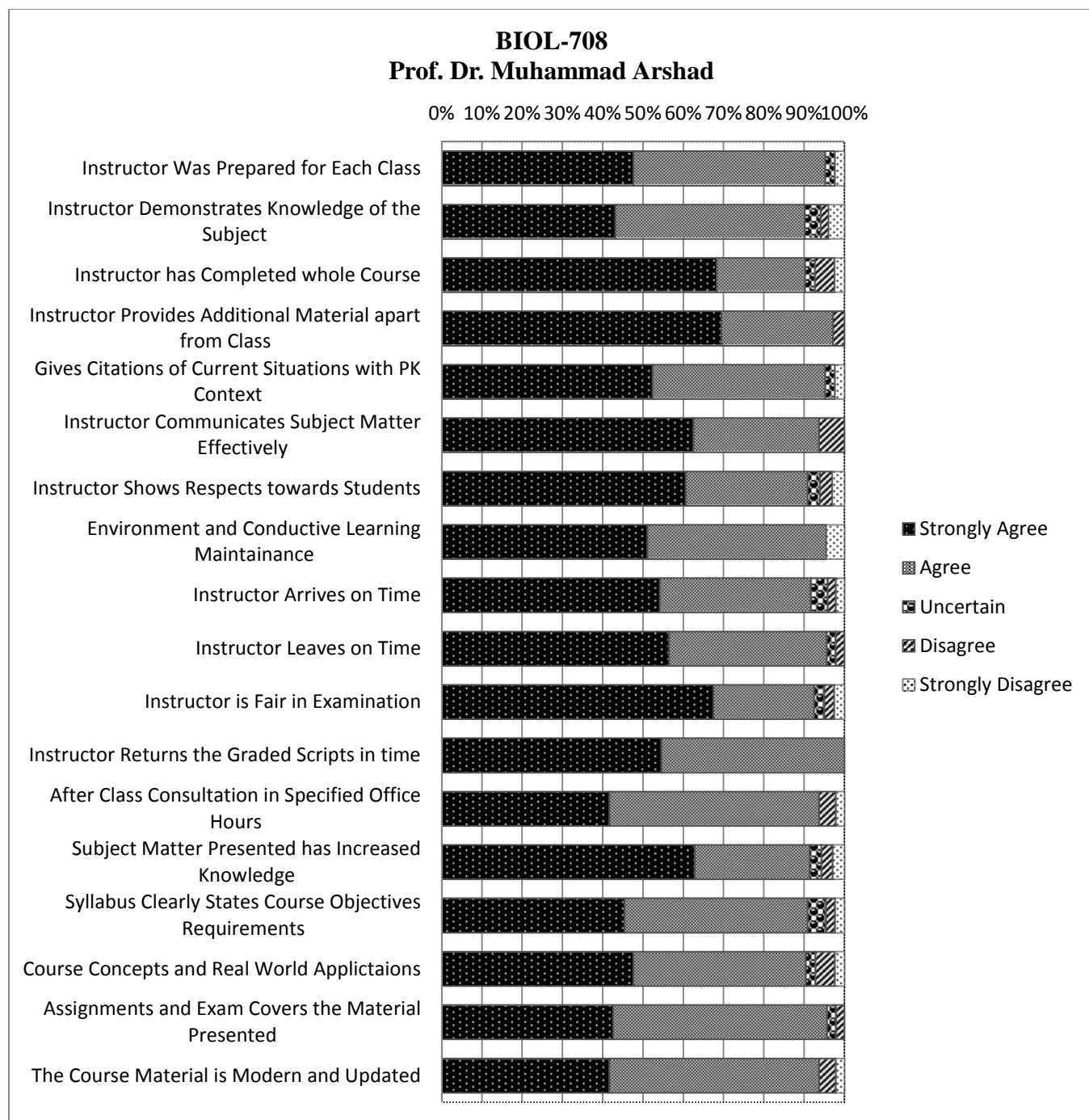


**General Comments of the Students about this Teacher**

**Weaknesses:** Teacher not return the graded script in time

**Strengths:** Regularity was excellent. Examination was fair and students have increased their knowledge. Most of the students satisfied with teacher



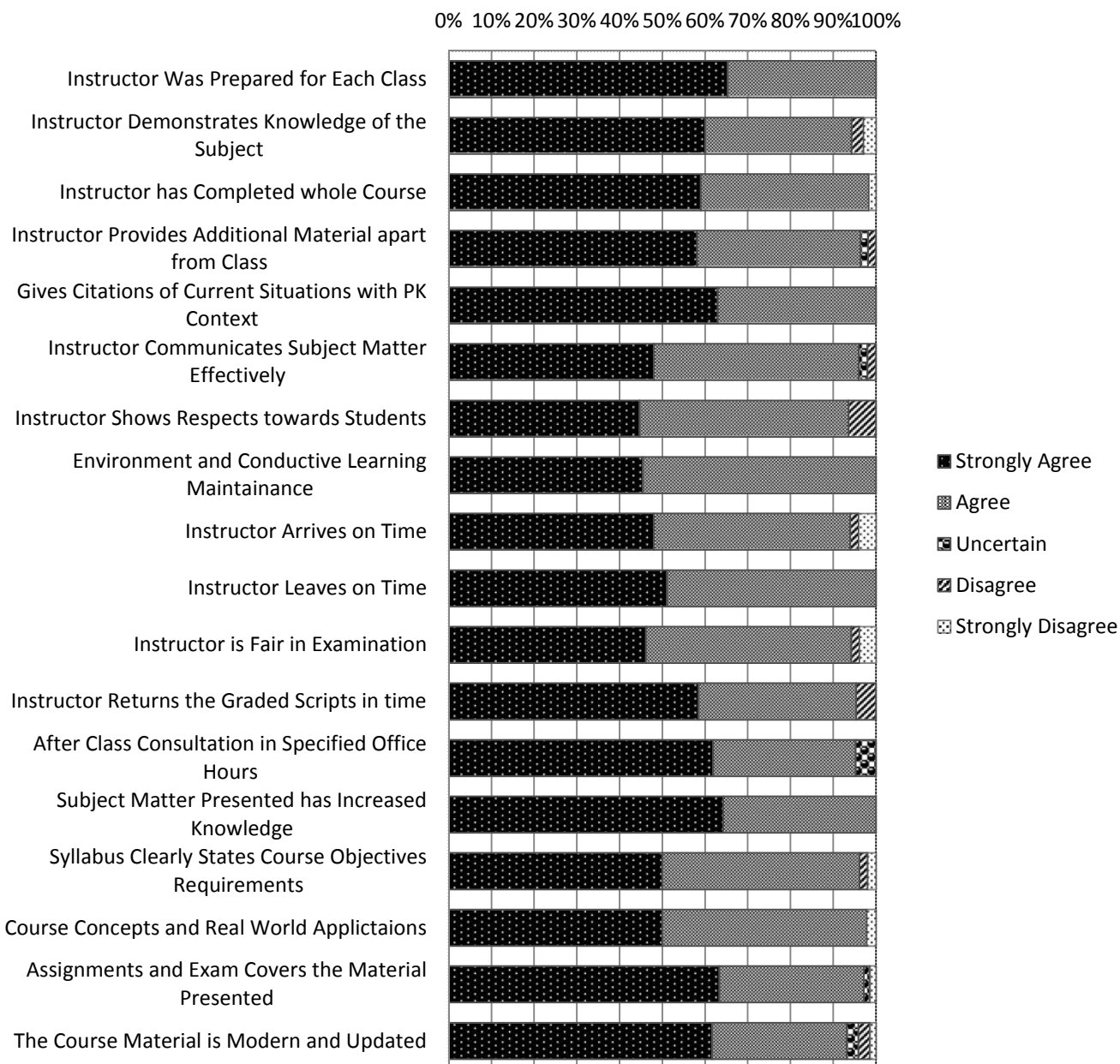


### General Comments of the Students about this Teacher

**Weaknesses:** course material require modernization and updation

**Strengths:** Instructor presented the subject matter effectively and completed the whole course.

**BIOL-728**  
**Mr. Zia Ur Rehman Mishwani**



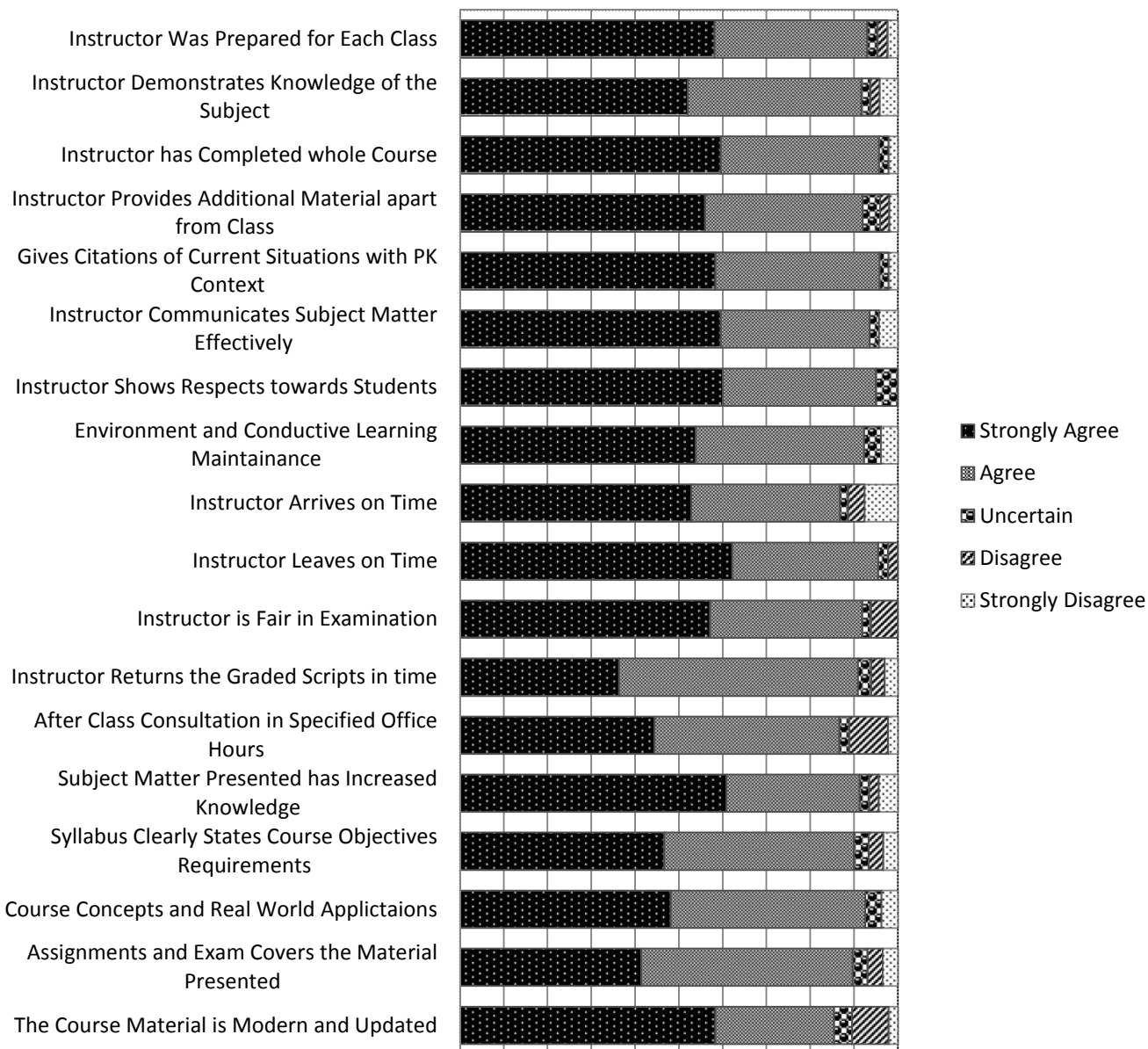
**General Comments of the Students about this Teacher**

**Weaknesses:** Teacher was strict in grading

**Strengths:** Most of the students are agreed with teacher and they have confirmed the teacher is outstanding in all aspects

**BIOL-728**  
**Dr. Naveed Iqbal Raja**

0% 10% 20% 30% 40% 50% 60% 70% 80% 90%100%



**General Comments of the Students about this Teacher**

**Weaknesses:** Instructor did not return the graded scripts in time

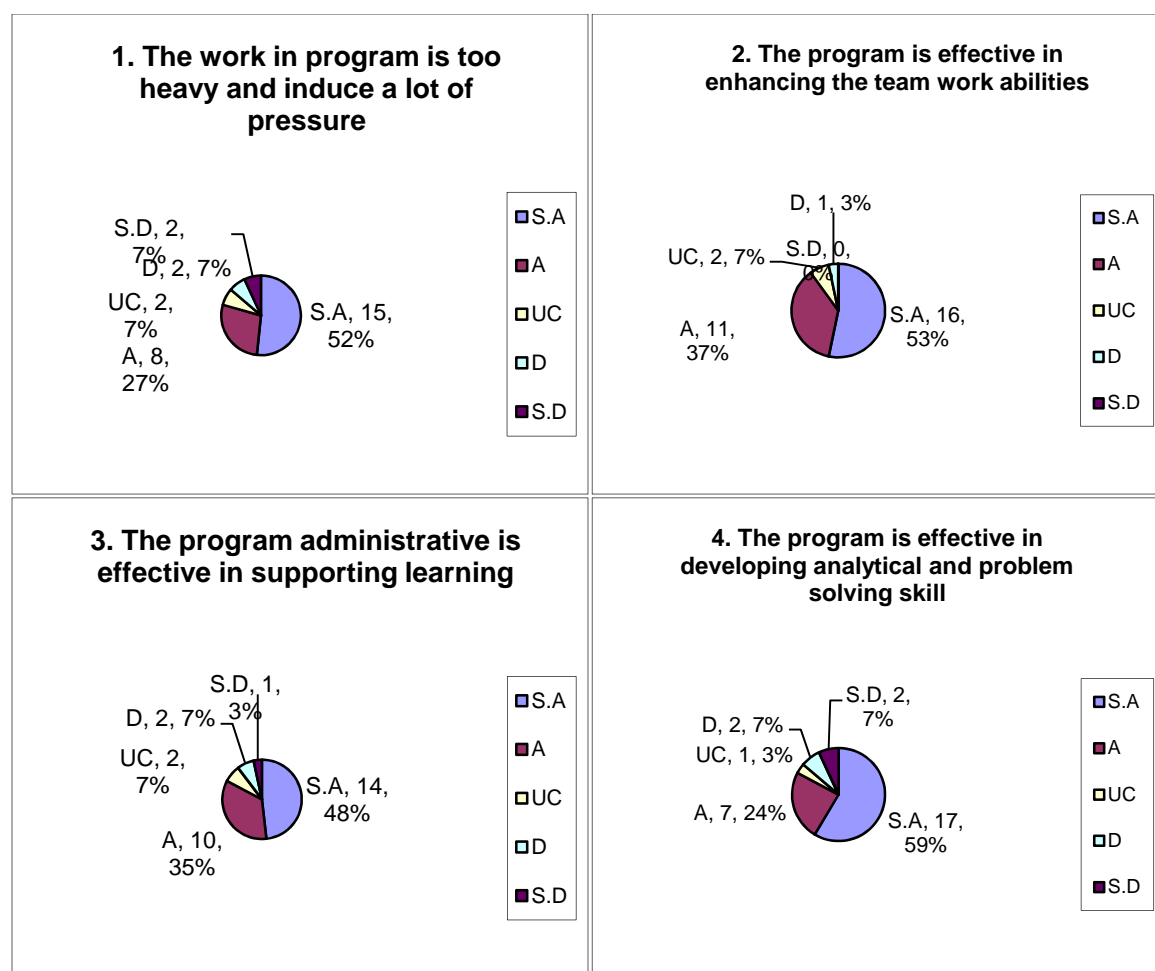
**Strengths:** Instructor presented the subject matter effectively and completed the whole course. Regularity was excellent.

**Performa 2: FACULTY COURSE REVIEW REPORT**

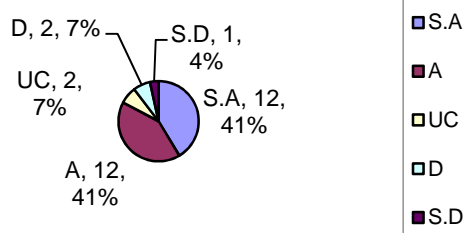
Department	Botany
Faculty	Sciences
Courses	Described earlier in SAR
Assessment method	As per University rules and regulations
Distribution of Grades/Marks	As per University rules and regulations
Overview/Evaluation ( course Co-coordinator's comments)	Satisfied
Students (course evaluation survey)	Satisfied
External Examiner	Student have sound theoretical knowledge
Student/Staff Consultative committee	N/A
Curriculum	In accordance with HEC guidelines
Assessment	Course objectives well defined and well achieved
Enhancement	Proposed changes in earlier course review report incorporated
Future changes	New and modern practical approaches may be incorporated if possible

### Proforma 3: GRADUATING STUDENTS SURVEY.

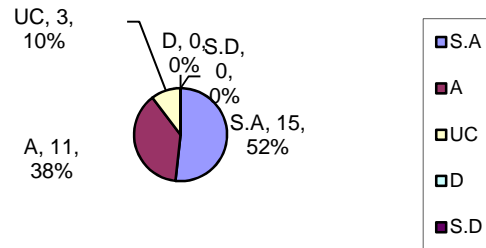
Results of survey of graduating students based on Proforma 3 show that 90% student agreed that the program is effective in enhancing the team working abilities. 83% students agreed that the program developed analytical and problem solving skills. 82% students showed their satisfaction over independent learning skills. 90% students agreed that the program developed writing skills in them. There was 83% agreement towards achievement of program objectives. There was 91% satisfaction towards curriculum. On average, there was 90% liking for faculty. However, there were reservation regarding co-curricular activities, scholarships and above all program workload.



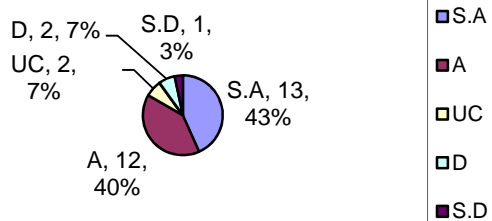
**5. The program is effective in developing independent thinking**



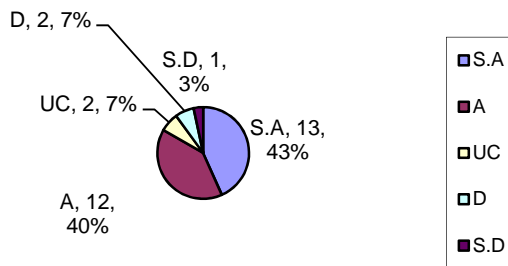
**6. The program is effective in developing written communication skill**



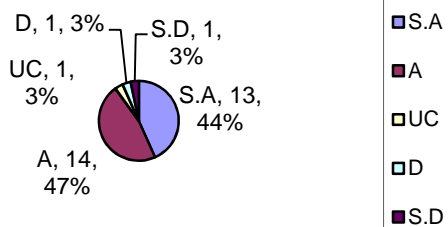
**7. The program is effective in developing planning abilities.**



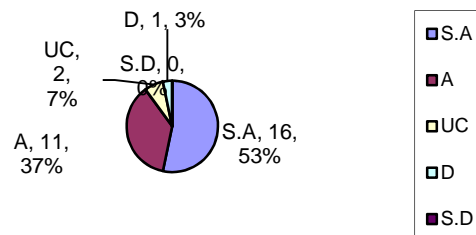
**8. The objective of the program have been fully achieved**

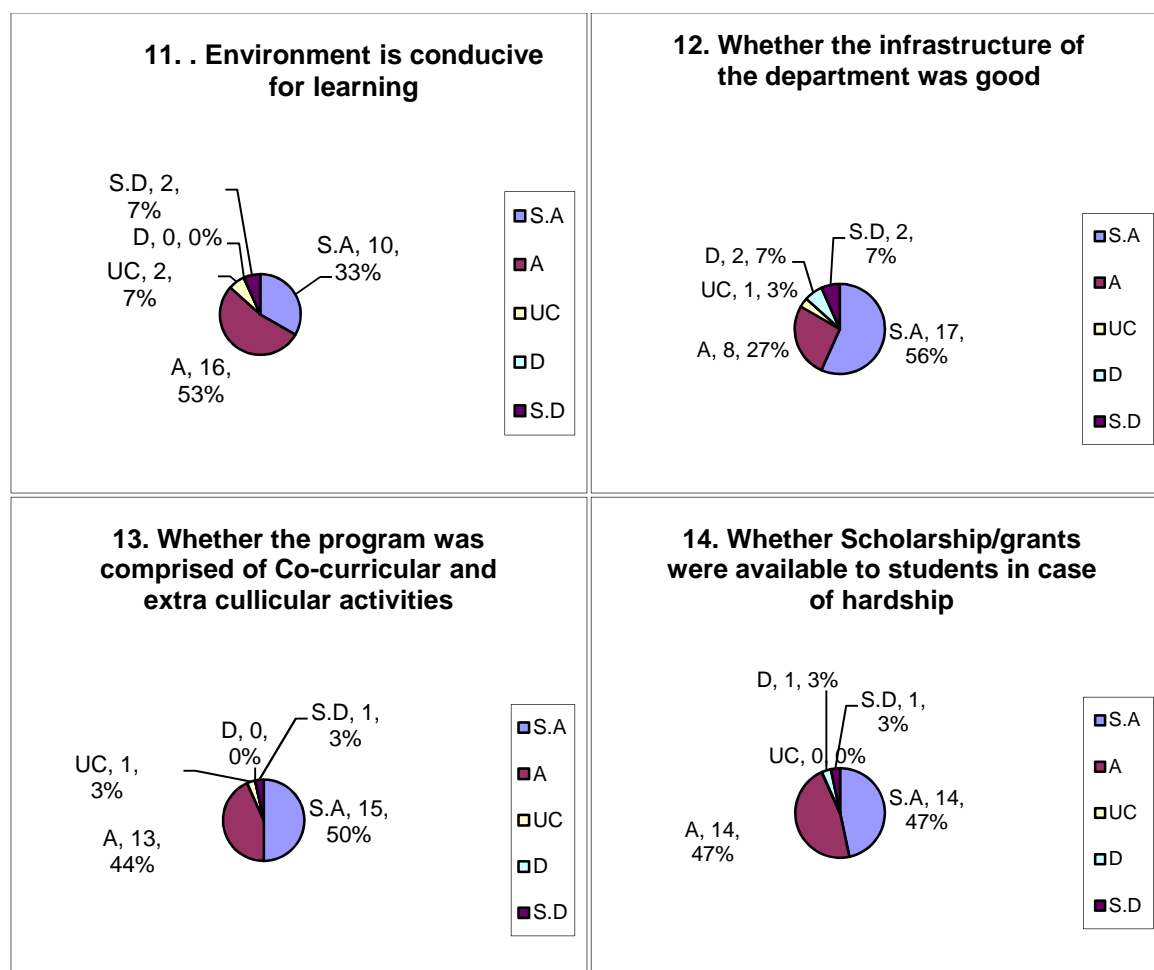


**9. Whether the contents of curriculum are advanced and meet program objectives**



**10. Faculty was able to meet the program objectives**





## Proforma 5: FACULTY SURVEY RESULTS

The results of faculty survey showed that most of the faculty members were pleased with their level of academic efforts . All the faculty members have a decent and respectable communication among themselves and with the students. However, some of the faculty members have reservation for the mentoring available to them and also to the time they have for themselves and their family.

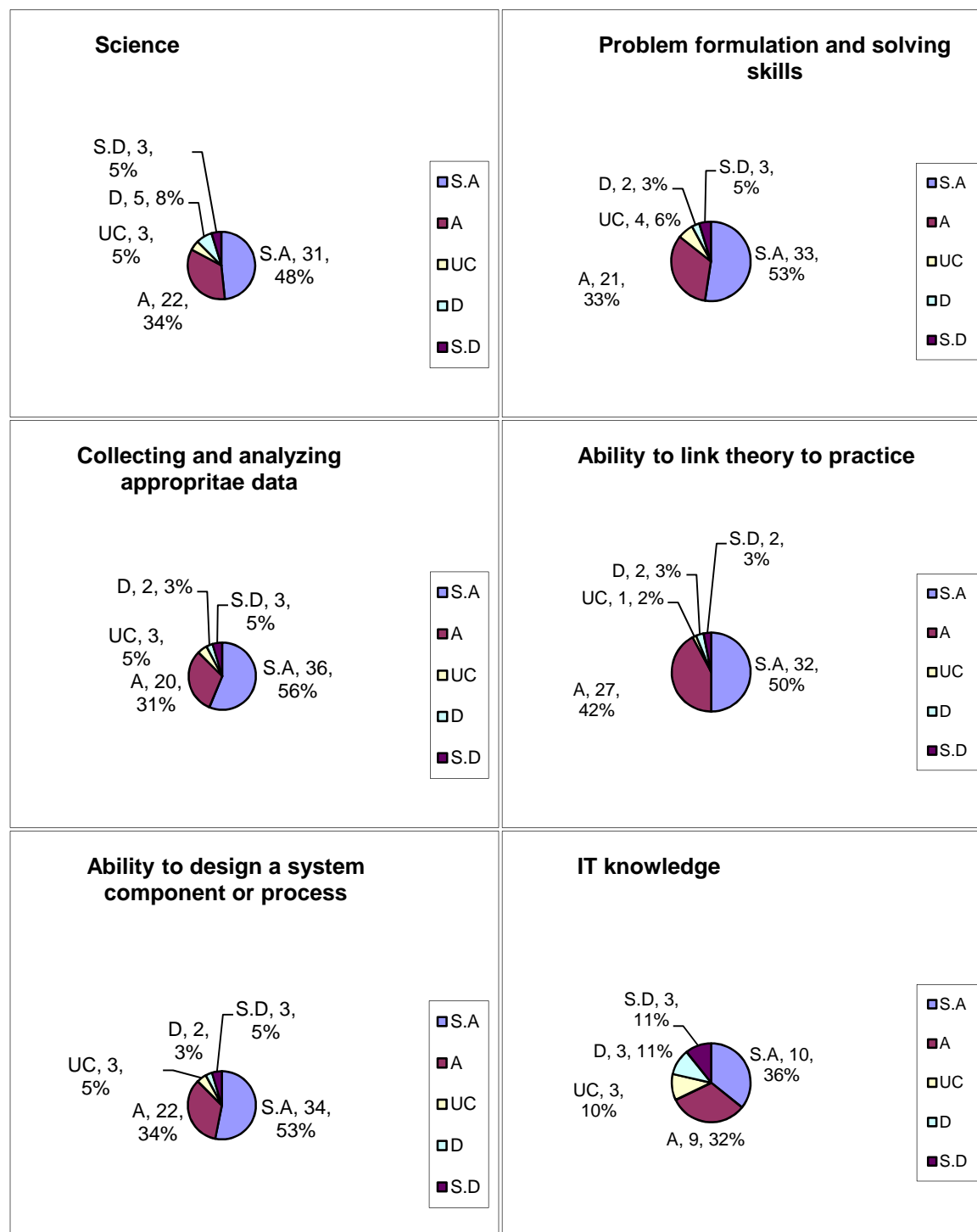
S. No .	Parameter	Dr. M. Arshad	Dr. Abida	Dr. Rahmat	Dr. Noshin	Dr. Naveed	Dr. Yamin	Mr. Zia Ur Rehman	Ms. Mubashrah	Ms. Saira
1.	Your mix of research, teaching and community service	A	B	B	B	B	B	B	B	B
2.	The intellectual	A	B	B	B	B	B	A	B	B

	stimulation of your work									
3.	Type of teaching/research you currently do.	B	B	A	A	A	A	A	A	B
4.	Your interaction with students	B	A	A	A	A	A	A	A	A
5.	Cooperation you received from colleagues	A	A	A	B	B	B	B	A	A
6.	The mentoring available to you	B	B	C	B	B	B	A	C	C
7.	Administrative support from the department	A	B	B	A	B	B	A	A	A
8.	Providing clarity about the faculty promotion process	B	B	A	A	B	B	B	A	A
9.	Your prospects for advancement and progress through ranks	A	B	B	A	B	B	B	B	B
10.	Salary and compensation Packages	A	B	B	B	B	B	A	B	B
11.	Job security and stability at the department	B	B	B	A	B	B	A	B	B
12.	Amount of time you have for yourself and family	C	B	C	B	B	B	B	C	B
13.	The overall climate at the Department	B	A	B	B	A	A	A	A	A
14.	Whether the department is utilizing your experience and knowledge	B	B	B	B	A	A	A	B	B



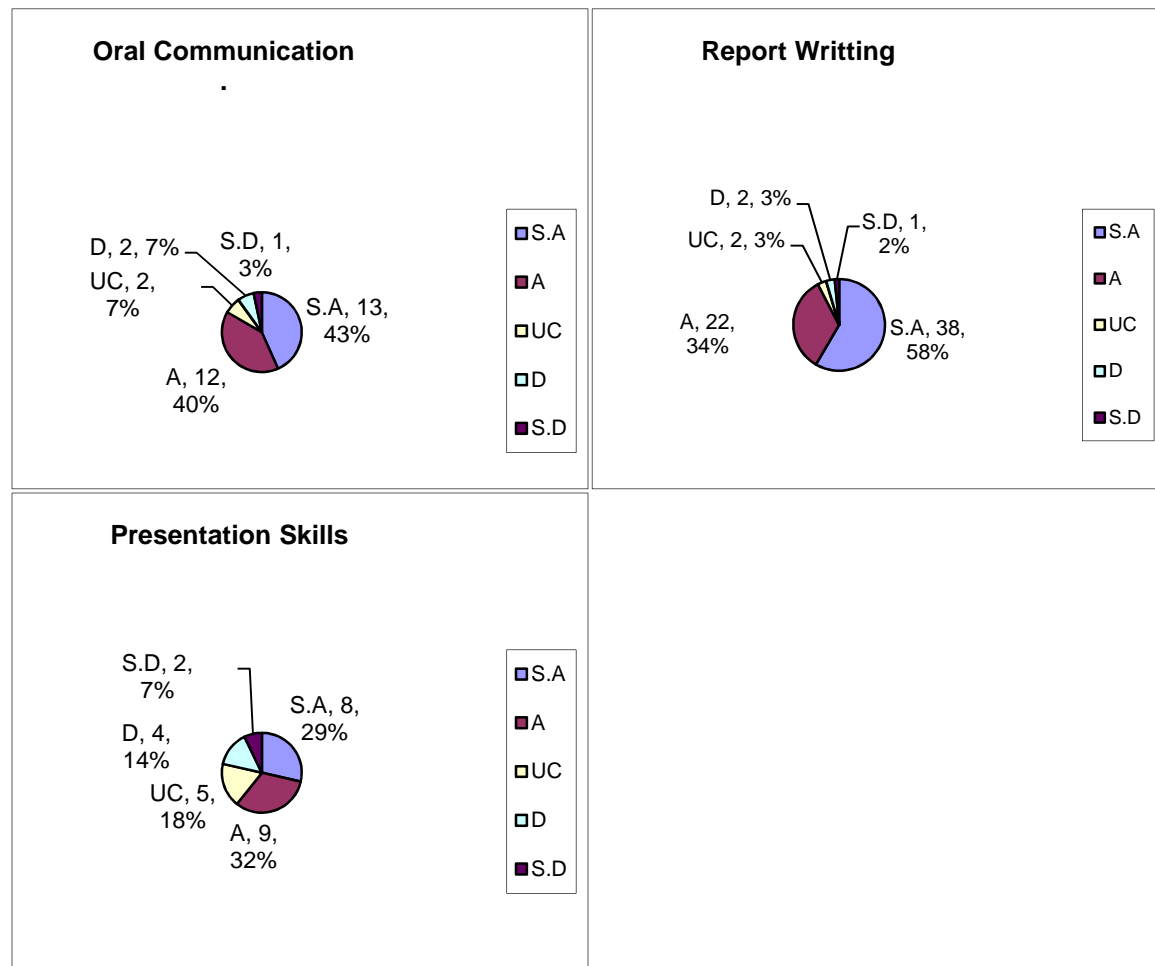
## Proforma 7: ALUMNI SURVEY RESULTS:

The graduates of Botany Department join mostly research institutes, universities or opt for academic jobs, so Proforma 7 was sent to concerned institutes and overall feedback results of program assessment by the Alumni are presented in the following figure.



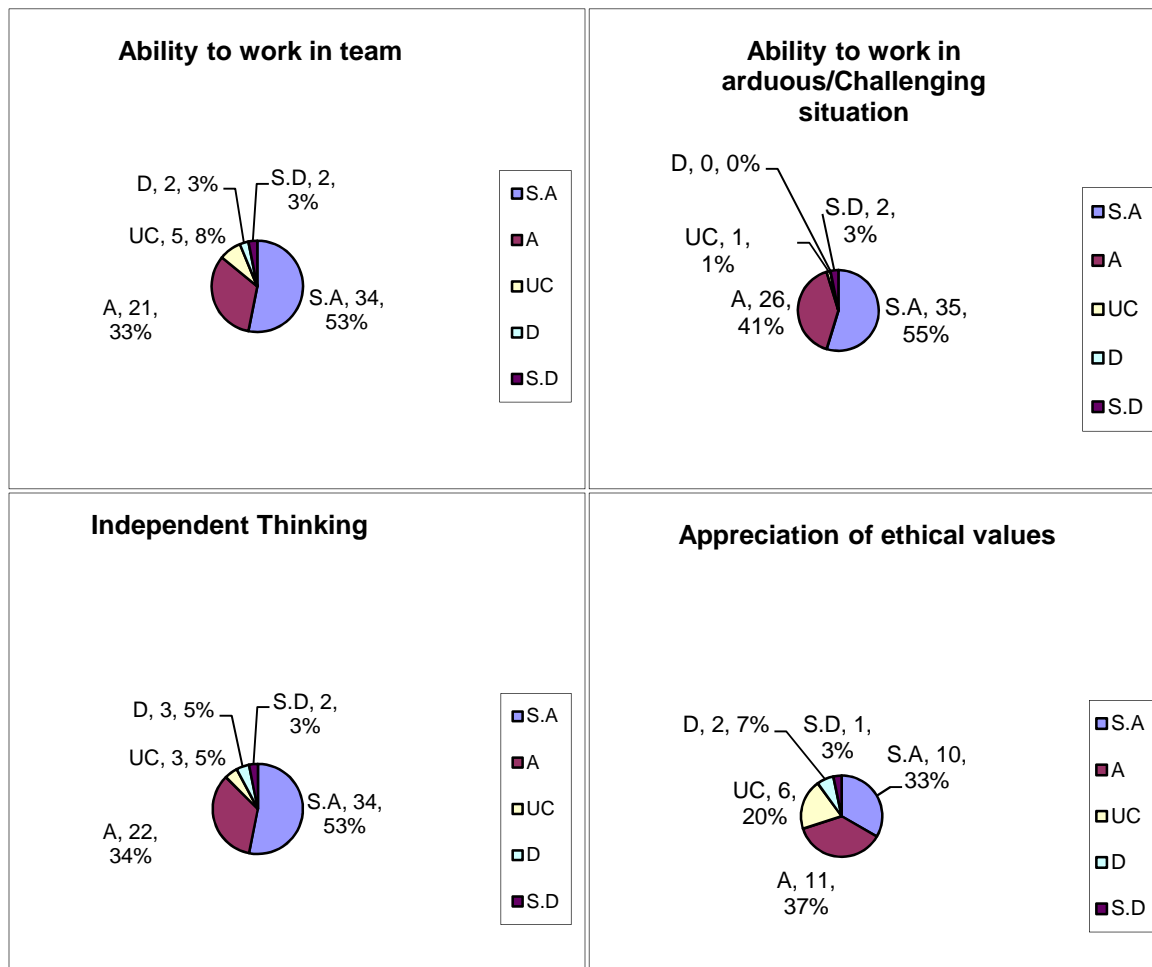
### Figures: Knowledge

Results obtained from alumni survey showed that when the alumni were asked regarding the knowledge they obtained from this department, the overall response was satisfactory. 82% of the alumni agreed that they were well acquainted with scientific knowledge. 86% of the students showed their agreement regarding learning problem formulation and solving skill. Most strong positive response was given by alumni regarding collection and analyze of data where 87% alumni showed agreement which means department was able to impart research skills in students. Regarding linking theory to practice 92% alumni showed agreement. Alumni showed agreement towards ability to design system components by 87%. There was a lack in IT knowledge as shown by disagreement of 22% alumni and 10% uncertain.



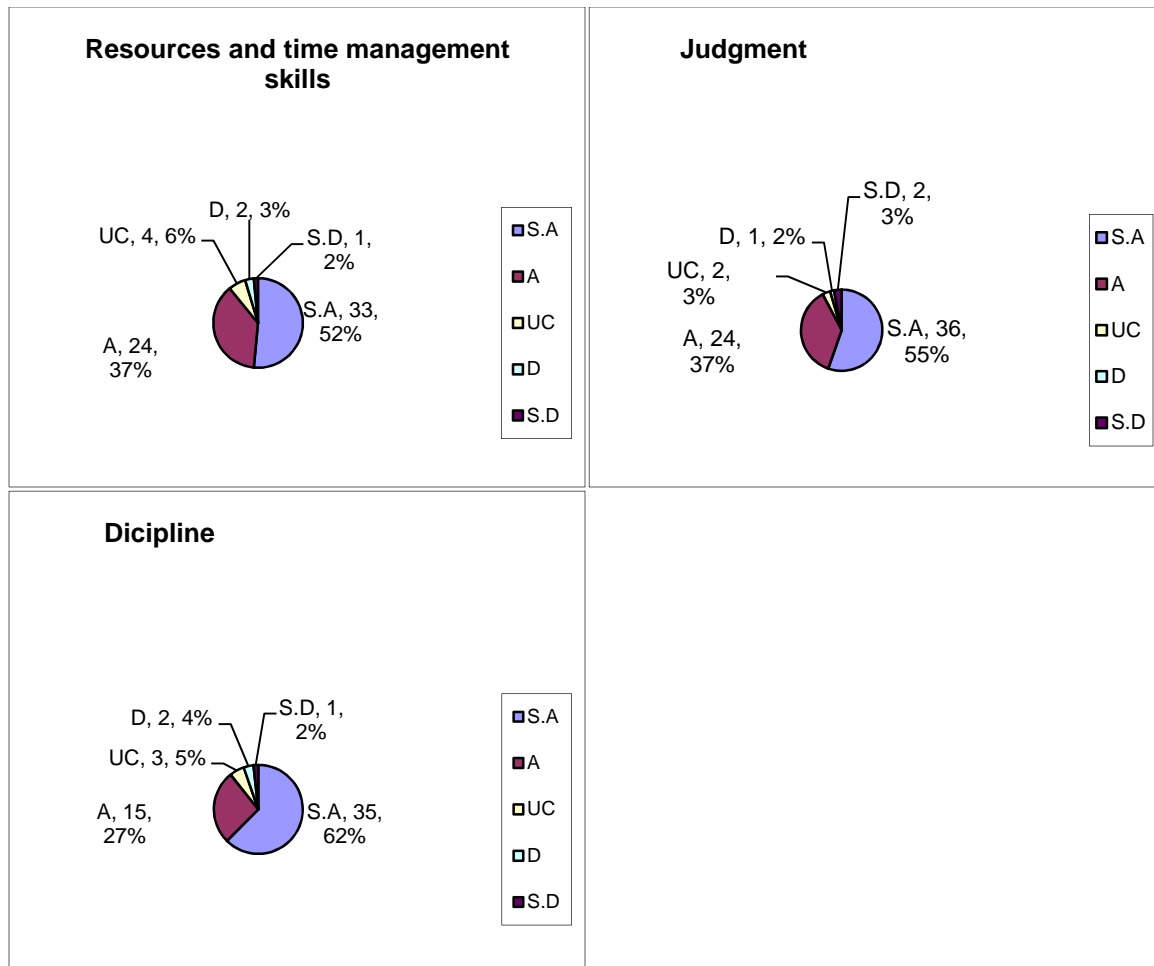
## Figures: Communication Skills

It is evident from pie charts regarding writing skills 92% of the students were agreed, while 93 % students showed agreement in their oral communication; However 18% were uncertain for their presentation skills and 21% showed disagreement.



**Fig: Interpersonal Skills**

Regarding interpersonal skills, the feedback of the alumni showed that there was a 86% response in ability to learn in a team. Similarly, 96% agreed in their learning the ability to work under challenging conditions. 86% of students agreed to acquiring independent thinking, however 10% alumni disagreed regarding appreciation of ethical values and 20 % were uncertain.



**Fig: Management/Leadership Skills**

The chart regarding Management and Leadership skills s skills showed that 89 % of the students were agreed to resource and time management skills. 92% alumni were positive in learning judgment skills. Similarly 89% agreed regarding discipline.

## Proforma 08: EMPLOYER SURVEY

Feedback about employees was obtained from organizations viz. Education department, National Agriculture Research Centre Islamabad (NARC), Pir Mehr Ali Shah Arid Agriculture University Rawalpindi, Federal Seed Certification Department, Islamabad and Department of Agricultural Extension Punjab. Their views are reflected in the bar diagram below. The major emphasis was to know the employers comments on the quality of education regarding: knowledge, communication skill, work skill and interpersonal skill these students have. Survey reflects that our graduates fall above average and in all areas. Their abilities were rated above 70%. This indicates that our graduates are well adaptable and show their better potential in any given environment. However, some employers have given general comments about some weaknesses, particularly the practical workability. The point has been well noted and will be tried to overcome for our future and current students.

As per Performa 8



## **PROGRAM OUTCOMES:**

### **Skills and capabilities Reflected In performance as Botanists:**

Degree of skills and capabilities that will reflect on their performance as botanist:

- Students shall have an understanding of the impact of study of botany on environment.
  - Student will be able to know about flora of Pakistan.
  - Students shall have an ability to identify plants up to species level.
  - Students shall have recognition for economic uses of plants.
  - Students will learn about medicinal importance of plants.
  - They will also be well acquaintance to know ecological zoning.
  - Students shall have well defined concept about plant communities.
  - Students will update their knowledge about morphological and physiological adaptation in plants.
  - Students shall learn to use basic and applied knowledge in field of Practicals.
  - Students shall learn to employ advanced analytical techniques.
  - This skill development will lead them to apply given knowledge of plants.
  - Students shall have an ability to use conventional as well as modern tools, techniques and skills necessary to conduct botanical research.
  - Students shall learn to develop an insight for research design.
- 
- Students shall have an understanding of professional and ethical responsibilities of a botanist.
  - Students shall have an ability to work effectively in teams including multidisciplinary teams to solve problems relevant to their field.
  - Students will be able to work as professionals.
  - It will also build confidence to communicate and shall also develop the skill of effective writing.

### **Strength of the Department**

1. Faculty members are
  - fully qualified
  - Have good command of their subject.
  - And have specialization in their respective fields.
2. Labs are reasonably equipped.
3. Different project are going on in the department which are helping in strengthening of department.

### **Weaknesses Identified in the Program**

1. There is a need of short foreign training to faculty members
2. There is a lack of lectures halls.
3. Latest literature and review are hardly available
4. Lack of Gas supply in Laboratories
5. As an integral part of the department, it must have
  - Herbarium & botanic garden
  - Green house,
  - Computer Lab,
  - Departmental library
  -
6. There is lack of supporting staff.

### Major Feature of Improvement Plans

- To establish herbarium and Botanic garden in order to aid the students by physically observing plants in preserved and live state.
- To establish computer Lab for students
- To develop departmental library.

**Table 3: Quantitative Assessment of the Department (Year 2011-2012)**

Sr. No.	Particular	No	Remarks
1	M. Sc. degree awarded	65	15 students joined M. Phil. program; the remaining got employment, currently holding various positions
2	Students: Faculty ratio	1:20	Fulfils HEC criteria
3	Technical : No technical ratio	2: 4	Fulfils HEC criteria
4	Average grade point	?	Fulfils HEC criteria

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



**Table 4: Present performance Measures for Research Activities**

<b>S. No</b>	<b>Faculty</b>	<b>Journal Publication &amp; (National International)</b>	<b>Conference Publication (proceedings abstract)</b>	<b>Projects</b>
<b>1.</b>	Dr. M. Arshad	32 International 53 National	Nil.	02
<b>2.</b>	Dr. Abida Akram	12 International 08 National	03	01
<b>3.</b>	Dr. Rahmatullah Qureshi	15 International 23 National	Proceeding 01	01
<b>4.</b>	Dr. Noshin Ilyas	10		01
<b>5.</b>	Dr. Naveed Iqbal Raja	11		01
<b>6.</b>	Dr. Yamin Bibi	10		01
<b>7.</b>	Ms. Mubashra Munir	03 National	0	01
<b>8.</b>	Mr. Zia Ur Rehman Mashwani	07	15	01
<b>9.</b>	Ms Saira Asif	2	Nil	Nil

The department is well staffed; distinguishing feature is the availability of all expertise (Genomics, Ecology, Taxonomy, Physiology, and Mycology).

### **Faculty Satisfaction Regarding the Administrative Services**

- There are some reservations of faculty about some administrative offices of the university about disposal of documents which usually delayed.

**Table 5: Degree requirements**

<b>Degree</b>	<b>Pre-requisites</b>
M. Sc.	B. Sc. with 45% marks from a recognized institution,

## **SECTION 2**

### **Criterion 2: Curriculum Design and Organization**

#### **A. Title of Degree Program: M. Sc. in Botany**

**Intent:** All the courses for degree program were developed by board of studies, faculty and then academic council. Guidelines given by HEC curriculum committee are also considered.

#### **B. Definition of Credit Hour**

A student must complete a definite number of credit hours. One credit hour is one theory lecture or two hours laboratory (practical work/weeks). One credit hour carries 20 marks.

#### **C. Degree Plan**

Presently three degree programs are organized by the department including M.Sc, M.Phil and PhD

- **M. Sc (Botany)**

The M. Sc. degree programme consists of 02 academic years / 04 semesters. As a whole a student has to study 20 Theory papers to total credit hours, out of this 04 Marks are assigned for evaluation through assignments, test and exercises by the concerned teacher and the remaining marks for mid and final 56 as per university examination rules. Degrees are awarded after completing the required number of credit hours (courses) following by Comprehensive Examination.

**. Table 6: Core Courses**

<b>S. No.</b>	<b>Course</b>	<b>Title</b>	<b>Credit</b>
<b>1</b>	BOT-701	Diversity in Non- Vascular Plants	3(2-2)
<b>2</b>	BOT-702	Plant and Cell Physiology-I	3(2-2)
<b>3</b>	BOT-703	Plant and Cell Physiology-II	3(2-2)
<b>4</b>	BOT-704	Phytosociology	3(2-2)
<b>5</b>	BOT-705	Plant Taxonomy and Embryology	3(2-2)
<b>6</b>	BOT-706	Diversity in Vascular Plants	3(2-2)
<b>7</b>	BOT-707	Plant Anatomy	3(2-2)
<b>8</b>	BOT-708	Mycology and Plant Pathology	3(2-2)

<b>S. No.</b>	<b>Course</b>	<b>Title</b>	<b>Credit</b>
<b>9</b>	BOT-709	Plant Ecology	3(2-2)
<b>10</b>	BOT-710	Ethnobotany	3(2-2)
<b>11</b>	BOT-711	Environmental Pollution	3(2-2)
<b>12</b>	BOT-712	Research Planning and Report Writing	3(1-4)
<b>13</b>	BOT-720	Seminar	1(1-0)
<b>Optional Courses</b>			
<b>14</b>	BOT-713	Medicinal Plants of Pakistan	3(2-2)
<b>15</b>	BOT-714	Molecular Plant Development	3(3-0)
<b>16</b>	BOT-715	Phytogeography	3(2-2)
<b>17</b>	BOT-716	Research Techniques and Instrumentation	3(2-2)
<b>18</b>	BOT-717	Phytohormones	3(2-2)
<b>19</b>	BOT-718	Arid Zone Ecology	3(2-2)
<b>20</b>	BOT-719	Special Problem	1(1-0)
<b>21</b>	BOT-720	Seminar-I	1(1-0)
<b>22</b>	BOT-720	Seminar-II	1(1-0)
<b>23</b>	BOT-721	Stress Physiology	3(2-2)
<b>24</b>	BOT-722	Plant Nutrition	3(2-2)
<b>25</b>	BOT-723	Advance in Plant Physiology	3(3-0)
<b>26</b>	BOT-724	Molecular Basis of Morphogenesis	3(3-0)
<b>27</b>	BOT-725	Molecular Advances in Phytosystematics	3(3-0)
<b>28</b>	BOT-726	Environmental Toxicology and Bioremediation	3(2-2)
<b>29</b>	BOT-727	Environmental Biotechnology	3(3-0)
<b>30</b>	BOT-728	Principles of Genome Analysis and Genomics	3(3-0)
<b>31</b>	BOT-729	Biology of Halophytes	3(2-2)
<b>32</b>	BOT-730	Environmental Plant Physiology	3(2-2)
<b>33</b>	BOT-731	Conservation and Management of PlantResources	3(1-4)
<b>34</b>	BOT-732	Plant Proteomics	3(2-2)
<b>35</b>	BOT-733	Physiological Genetics of Plants	3(3-0)
<b>36</b>	BOT-734	Forensic Botany	3(3-0)
<b>37</b>	BOT-735	Plant-microbe Interactions	3(2-2)
<b>38</b>	BOT-736	Plant systematic	3(2-2)
<b>39</b>	BOT-737	Applied Ethnobotany	3(2-2)
<b>40</b>	BOT-751	Integrated Biological Resource Management	3(3-0)
All courses offered for M. Sc. Programmes can be offered to the Ph. D. students, depending			

S. No.	Course	Title	Credit
upon their requirements			

Curriculum course requirement for M. Sc./M. Phil./Ph. D degree is summarized in the following table, whereas , their detailed description is also provided at end of report.

### Standard 2.1: Assessment of the Curriculum of Botany Department

The assessment of curriculum is done in the following table and the courses are cross tabulated according to the program out comes.

### Meeting Standard 2.1: Courses versus Program Outcomes

**Table 7: Course vs. Program Outcome**

COURSE	Outcomes		
	1	2	3
<b>BOT-707</b>	**	**	***
<b>BOT-710</b>	***	**	**
<b>BOT-703</b>	**	**	**
<b>BOT-708</b>	**	**	***
<b>BOT-737</b>	***	**	**
<b>Biol-302</b>	***	**	**
<b>BOT-706</b>	**	**	***
<b>BOT-705</b>	**	***	**
<b>BOT-702</b>	***	**	***
<b>BOT-708</b>	**	**	**
<b>BOT-712</b>	**	**	***
<b>Biol-301</b>	**	***	**
<b>BOT-701</b>	***	**	**

- \* = Relevant  
 \*\* = Relevant and satisfactory  
 \*\*\* = Very relevant and satisfactory  
 \*\*\*\* = highly relevant and satisfactory

- The curriculum fits well and satisfies the core requirements for the program, as specified 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.

## **Standard 2-2: Elements Vs Courses**

### **Meeting standard 2-2: Percentage of Elements in Courses**

<b>Elements</b>	<b>Courses</b>
Theoretical backgrounds	BOT-701, BOT-702, BOT-703, BOT-704, BOT-705, BOT-706, BOT-707, BOT-708, BOT-709, BOT-710, BOT-711, BOT-713, BOT-714, BOT-715, BOT-717, BOT-718, BOT-721, BOT-722, BOT-723, BOT-724, BOT-725, BOT-726, BOT-727, BOT-728, BOT-729, BOT-730, BOT-732, BOT-733, BOT-735, BOT-738
Problem analysis	BOT-712, BOT-736, BOT-737, BOT-751
Solution designs	BOT-716, BOT-719, BOT-720, BOT-731, BOT-734, BOT-799

## **Standard 2-3**

The curriculum for the core courses is designed as per requirements as approved by HEC.

## **Standard 2-4**

The curriculum meets major requirements as approved by HEC.

## **Standard 2-7**

### **Enhancing Oral and written Communication Skills of the students**

- Skill is developed through seminars, assignment and presentation by the faculty in their respective courses.

## **SECTION 3**

### **Criterion 3: LABORATORIES AND COMPUTING FACILITIES**

There is one Laboratory for M.Sc programme in the department. The facilities and shortcomings of laboratory are listed as under.

### **LAB-1**

<b>Laboratory title</b>	<b><i>Post Graduate Botany Lab</i></b> (for M.Sc students)
<b>Location and Area</b>	Faculty of Sciences, Department of Botany, 2 <sup>nd</sup> floor, New Academic Block.
<b>Objectives</b>	Laboratory is used for <ul style="list-style-type: none"><li>➤ Practical exercise and demonstration to master students in their introductory and major courses.</li><li>➤ Research work for the graduate and post graduate students.</li><li>➤ Laboratory is spacious and adequate for practicals and teaching.</li></ul>
<b>Major apparatus viz equipments</b>	Laboratory is equipped with basic apparatus and reagents. These include microscopes, slides, Hot plate, weighing balance, pH meter, electric balance, EC meter etc.
<b>Safely Regulations</b>	Safely measures are unavailable against fire (extinguisher), minor hazards and accidents, injuries (First Aid Kit). However, the university maintains a Medical Dispensary for such incidents.

#### **Standard 3-1: Laboratory Manuals:**

- Individual teachers have prepared some manuals but in general there lacking of labortary manual of each subject on account of absence of department Library.
- The equipments are fairly sufficient however; instruments regarding molecular approaches are lacking e.g. refrigerated centrifuge, PCR Spectrophotometer.

#### **Standard 3-2: Support/Laboratory Personal for Maintenance of Laboratory**

Laboratories are maintained by only one laboratory assistant (equipment, glassware, chemicals, material etc). Three laboratories attendants assist students in practical, cleaning and washing.

#### **Standard 3-3: Computing Infrastructure and Facilities**

Computer facilities are insufficient and not available to all faculty members and the postgraduate students.

However the department has the following shortcomings/ problems:

- Majority of the faculty members do not have access to the PCs as department have only one Computer provided by the university.
- IT issues, virus problems, telephone sets / connections?
- Not availability of internet facility

## **SECTION 4:**

### **Criterion 4: Student Support and Advising**

#### **Departmental Orientation**

All newly admitted students are given orientation session at departmental level. It covers orientation about semester system, introduction of faculty and staff and use departmental facilities and services.

#### **Student Advisor**

One of the faculty members is deputed as student advisor. The services provided by the student advisor are:

- Organization of function at departmental level
- Solving students problems (personal and academic)
- Providing general assistance

#### **Standard 4-1: Frequency of courses**

- Courses are taught as per approved scheme of study.

#### **Standard 4-2: Structure of the Courses**

The majority of the courses are divided into two major aspects: Theoretical and Practical.

**Theoretical portion** covered in teaching, assignments and presentations.

**Practicals aspects** are covered by performing experiments in Labs and fields. In order to update students about the latest developments in study area visits to various research organization areas is also organized.

#### **Standard 4.3: Guidance to the Students**

There is a strong and regular communication between student advisors and students to discuss about program requirements. Regular interaction between student and teacher supports advising and counseling system.



## **SECTION 5: PROCESS CONTROLL**

### **Standard 5.1: Admission Criteria for Each Programme**

- The process of admission well established and followed as per rules and criteria set by university. For this purpose an advertisement is given in the national papers by the Registrar office.
- Admission criteria:
  - **M. Sc.** (B. Sc. at least 2<sup>nd</sup> division With Botany)
- Admission criteria are revised every year before the announcement of admissions.

### **Standard 5.2: Process of Registration and Monitoring of Students.**

- The complete list of finally admitted candidate after fulfilling the admission criteria is to be forwarded to the registrar office for proper registration in the specific program. Registration numbers are issued to the students
- Students are registered once in a degree programme.
- Mid, Final, Practical exams and assignments are used to monitor student progress.

### **Standard 5.3: Recruiting Process for Faculty**

Recruitment policy for faculty followed by the University is as per HEC standard recommendation. New inductions are as follows:

- Vacant and newly created positions are advertised in the leading daily newspapers. Applications are received by the registrar office; call letters are issued to the short listed candidates on the basis of their experiences, qualification, publications and other qualities/ activities as fixed as per university rules.
- The candidates are interviewed by the university selection Board. Principal and alternate candidates are selected
- Selection of candidates is approved by the syndicate for issuing orders to join within a specified time period.
- Induction of new candidates depends upon the number of approved vacancies.
- Standard set by HEC are considered.

### **Retention of Excellent Faculty Members**

- At present, no procedure exists for retaining highly qualified faculty members.
- HEC also supports appointment of highly qualified members as foreign faculty professor, National Professors and deutes them in various departments of the university.

### **Standard 5.4: Process and Procedure to Ensure Teaching and Delivery of Course Material**

- Periodical revision of the curriculum helps high quality teaching. This revision is based upon requirements, innovations and new technology
- With the emergence of new fields, new courses are set and included in the curriculum
- Relevant and supporting material is available in university library
- Lecture aids are prepared by the teachers and given to the students.
- Most of the lectures are also supplemented by overheads, slides and pictures

- All efforts are made that the courses and knowledge imparted meet the objectives and outcomes. The progress is regularly reviewed in the staff meetings.

#### **5.5. Completion of Program Requirements**

- Announcement of the date of commencements examination by the controller of examinations announces.
- Notification of results after 30 days of the examinations finish, the controller office notifies the results of the students.
- The evaluation procedure consists of quizzes, mid and final examinations, practical formulas, assignments and reports, oral and technical presentation.

## SECTION 6

### Criterion 6: FACULTY

#### Standard 6-1: Full Time Faculty

**Table 8: Faculty Distribution by Program Areas in Botany**

Program area of specialization	Courses in the area and average number of sections per year	Number of faculty members in each area	Number of faculty with Ph. D degree
Taxonomy & Ethnobotany	6	2	1
Ecology	6	1	1
Physiology	8	1	1
Mycology and Plant Pathology	2	1	1
Tissue Culture	3	2	2
Total	25	7	6

**Table 9: Faculty Specialization**

S. No	Name	Position	Qualification	Specialization
1.	Dr. Muhammad Arshad	Professor	PhD	Plant Ecology
2.	Dr. Abida Akram	Assoc. Professor	Ph.D	Mycologist
3.	Dr. Rahmatullah Qureshi	Assoc. Professor	PhD	Plant Taxonomy & Ethnobotany
4.	Dr. Noshin Ilyas	Assist Professor	PhD	Plant Microbiologist
5.	Dr. Naveed Iqbal Raja	Assist Professor	PhD	Tissue culture
6.	Dr. Yamin Bibi	Assist Professor	PhD	Phytochemistry
7.	Ms. Mubashra Munir	Lecturer	M. Phil.	Fresh water biologist
8.	Ms. Saira Asif	Lecturer	M.Phil	Tissue Culture
9.	Mr. Zia Ur Rehman Mashwani	Lecturer	M.Phil	Ethnopharmacology

#### **Standard 6.2: Effective Programs for Faculty Development**

- Proficient implementation and accessibility of pleasing research and academic facilities are provided conferring to the faculty members.
- Incentives in the practice of allowances to thesis supervisors have been implemented lately to promote high standard research.

#### **Standard 6.3: Faculty member motivation**

- There is a calamitous necessity of motivation

## **SECTION 7**

### **Criterion 7: Institutional Facilities**

#### **Standard 7-1 infrastructure**

The institutional facilities are insufficient though the department has provided new space. These shortfalls are under:

- There is only one lecture hall for all classes on departmental disposal and the remaining shared with other department.
- The department has lack of departmental library.
- The Department lacks the computer and internet laboratory.
- New Labs are also required.
- Lab of the dept. lack the gas supply
- Upturn the department budget for research and experimentation.

#### **Standard 7-2 Library facilities**

The university central library has very limited number of books, journals and periodical, it's a small library in term of space and facilities 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**

- Shortage of lecture halls
- Faculty offices are inadequate.

## **SECTION 8**

### **Criterion 8: Institutional Support**

- There should be more encouragement for the faculty members to carry out quality research.
- There is inadequate supporting technical and official staff and some equipment.
- There is one classroom available therefore; classes are taken in the labs.

#### **Standard 8-1 Support and Financial Resources**

At present department is having a very insufficient financial resource to maintain the present needs of the department. Individual research grants for students and faculty are mainly supporting the departmental research activities. There is dire need of increasing the financial resources allocated to the department to establish a library, laboratories and computer facilities. Suggestions and factors that can contribute to the motivation to the faculty are given as follows:

- Research grants to the young faculty members.
- Discrimination should be discouraged at all levels.
- Sabbatical leaves for researches in the country and abroad.

#### **Standard 8-2 High Quality Graduate Students and Research scholars**

Graduate students are enrolled once in a year.. Lately, details of the students and research scholars are given following tables.

**Table 12: Showing the Number of students obtaining degree in different programs from 2003-09.**

STUDENTS	NOS									
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Postgraduate	39	42	43	41	32	60	56	57	67	57
Students: Faculty ratio				1:20			Fulfills HEC criteria			

**Standard 8-3 Financial Resources:**

Total budget of the department for the financial year 2011-12 is Rs. 1, 00000/- (One Lac rupees only) which hardly fulfills the departmental needs particularly for the purchase of necessary chemicals, etc.

## **SUMMARY AND CONCLUSION**

This Self-Assessment Report (SAR) encompasses the activities carried out for M.Sc. programme in department of Botany, Pir Mehr Ali Shah Arid Agriculture Rawalpindi from fall semester 2010-11 to fall 2011-12. The prior objective of Self-Assessment Report (SAR) was to examine academic activities as perceived by students of the Department of Botany. This report contains the program mission, objectives, out comes, curriculum design and organization. Procedure control capacity of faculty members, institutional facilities, and provision information is also cited in the report.

The foremost objective of this report is to figure out the major strengths and weaknesses of the departments. The students have been well trained in accordance with the new challenges and requirements of Botany. The data indicates that teachers and course evaluation survey results are satisfactory. Majority of the faculty members are performing well in terms of punctuality, well preparedness and knowledge demonstration.. The Graduating and Alumni survey show high abundant fulfillment among students. Curriculum design, development, and organization are based upon set, well defined and approved criteria. Pre requisites are fully observed, examinations are conducted as per schedules. Regular up gradation of scheme of study facilitate the introduction of new courses, which align the department with modern trends. The number of courses along with their titles and respective credit hours, course content for degree program is fully planned.. As regards the process control covering admission registration, recruiting policy, delivery of material, academic requirements, performance and grading. The rules formulated by university and HEC are properly followed. The efficacy was measured through set standards and was found to be satisfactory

During survey, it was observed that Institutional facilities mainly infrastructure, library, classroom, and faculty office, are still facing shortcoming and limitation. There is only one class room available to department, which is handicapping academic atmosphere. Institutional facilities need to be strengthened. Computer facilities are also needed to strengthen. Accordingly; institutional support in this regard can play a pivotal role in stream lining the sustained development of institution to update the knowledge of the faculty member.

In spite of all limitations, department is actively engaged in academic activities. The successful graduates produced by the Department of Botany are proving their worth in practical field is great assets in field of botany. There is a strong interaction of the department with other department like Soil Science, Agronomy, Plant Breeding and Genetic, Plant Pathology, Environmental Sciences and Forestry

**Prepared by:**

**Zia-ur-Rehman Mashwani**

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**Checked By:**

**(Dr Ikram Ali Malik)**

Director,  
Quality Enhancement cell  
Pir Mehr Ali Shah Arid Agriculture  
University, Rawalpindi

**Date of submission to HEC**



# Faculty Resume

Name:	Muhammad Arshad
Personal:	H. No. 12, UNIVERSITY COLONY NO. 2, PMAS Arid Agriculture University Rawalpindi, Pakistan. 051-9290093
Experience	<p>Jan. 2010 to date Chairman</p> <p>Feb 2007 to date Professor Department of Botany, PMAS Arid Agriculture University, Rawalpindi, Pakistan.</p> <p>Dec 2004 to Feb. 2007 Associate Professor Department of Botany, University of Arid Agriculture, Rawalpindi, Pakistan.</p> <p>June 2004 to May 2005 Administrative Incharge Department of Botany, University of Arid Agriculture, Rawalpindi, Pakistan.</p> <p>Jan., 1998 to Dec 2004 Assistant Professor Department of Botany, University of Arid Agriculture, Rawalpindi, Pakistan.</p> <p>Jan., 1998 to Feb, 1998 Chairman, Department of Biological Sciences University of Arid Agriculture, Rawalpindi, Pakistan</p> <p>May 1986 to Jan., 1998 Lecturer Department of Botany, University of Arid Agriculture, Rawalpindi, Pakistan.</p> <p>June 1984 to May 1986 Junior Research Assistant (JRA) Department of Biological Sciences, Quaid-i-Azam University, Islamabad, Pakistan.</p> <p>Aug. 1980 to April 1981 Apprentice Chemist Hyesons Sugar Mills, Khanpur Distt. Rahim Yar Khan Pakistan.</p>
Honors and Awards	<p>Medalist scored first position in M. Phil., Quaid-i-Azam University, Islamabad Pakistan.</p> <p>Award Merit Scholarship during H.S.C.</p> <p>Member of Cricket team, Department of Botany, University of Punjab, Lahore, Pakistan.</p> <p>Awarded merit certificate for best performance during cricket championship organized by Student Union, University of Punjab, Lahore, Pakistan.</p> <p>Certificate of Service, the National Cadet Corps, Govt. College Chichawatni, Distt. Sahiwal, Pakistan.</p>

	<p>Worked as Secretary, Department of Plant Protection, Barani Agricultural College Rawalpindi, Pakistan.</p> <p>Worked as Hostel Superintendent Form 1986 - 1989, Barani Agricultural College, Rawalpindi, Pakistan.</p> <p>Member of Examination Committee, Barani Agricultural College, Rawalpindi, Pakistan.</p> <p>President, Student Tutorial Group “Heaven” University of Arid Agriculture, Rawalpindi, Pakistan.</p> <p>Member of Board of Faculty, Faculty of Sciences, university of Arid Agriculture, Rawalpindi, Pakistan.</p> <p>Member of Environmental Friendly Club, University of Arid Agriculture, Rawalpindi, Pakistan.</p> <p>Incharge Sports (Badminton), University of Arid Agriculture, Rawalpindi, Pakistan.</p> <p>Academic supervisor of M.Sc. Botany students, University of Arid Agriculture, Rawalpindi, Pakistan.</p> <p>Member of Comprehensive Examination Committee of M.Sc. Botany students, University of Arid Agriculture, Rawalpindi, Pakistan.</p> <p>Incharge Administration, Department of Biological Sciences, University of Arid Agriculture, Rawalpindi.</p> <p>Member of advisory group of WWF project” Capacity building in ethnobotany applied to conservation and sustainable use of plants resources from 2001-2004.</p> <p>Member Scrutiny Committee of Synopsis of Ph.D/ M Phil. Botany Program.</p> <p>Approved Ph.D. Supervisor for Higher Education Commission.</p> <p>Paper setter Federal Public Service Commission for the subject of Botany.</p> <p>Member Board of Studies. Department of Botany, University of Azad Jammu and Kashmir, Muzzaferabad.</p> <p>Member Syndicate. University of Arid Agriculture, Rawalpindi for the period of two years (2005-2007).</p> <p>Member of University Finance and Planning Committee as a representative of Syndicate for the period of two years (2005-2007).</p> <p>Member of Advanced Studies and Research Board, Kohat University of Science and Technology, Kohat.</p> <p>Member of Board of Faculty of Crop and Food Sciences for the period of three years (August 2006 to August 2009) as a nominee of Academic council.</p> <p>Prepared the UAAR scheme of study for the courses of M.Sc. and M.Phil. Botany and Biology.</p> <p>Paper setter / Examiner of Botany for various universities of</p>
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	<p>Pakistan.</p> <p>Resource person to establish National Data Base for the subject of Botany to National Testing Service (NTS) Pakistan.</p> <p>Enquiry officer for some enquiries at UAAR.</p> <p>Member of University Cafeteria Committee.</p> <p>Member of Board of Faculty of Forestry Range Management and Wildlife for the period of three years (Aug. 2007 to Aug. 2010) as a nominee of Academic Council.</p> <p>Member Pakistan Phytopathological Society.</p> <p>Member of synopsis scrutiny committee of Department of Environmental Sciences, Faculty of Forestry, Range Management and Wildlife for the period of three years i.e. from March 2008 to February 2011</p> <p>Member of Board of Studies, Dept. of Plant Sciences, QAU Islamabad</p> <p>Advisor/Subject Specialist, Punjab Public Service Commission, Lahore</p> <p>Member of comprehensive committee of M. Phil, Dept of Environmental sciences PMAS AAUR.</p> <p>Member of self assessment committee of tenure track system QAU Islamabad</p> <p>Member of self assessment committee, Dept of Botany, PMAS AAUR.</p> <p>Member of Board of Faculty of Crop and Food Sciences for the period of three years (August 2009 to August 2012) as a nominee of Academic council.</p> <p>Member of Board of Studies, Dept. of Plant Sciences, QAU Islamabad from May 2009 –May 2012</p> <p>Member Scrutiny Committee of Synopsis of Ph.D/ M Phil.Biology Program.</p> <p>Examiner for screening professional test conducted by Federal Public Commission.</p> <p>Member of Advance Study and Research Board of University as Nominee of Academic Council.</p> <p>Chairman purchase committee PMAS Arid Agric University Sep 2012</p> <p>Member Unfair Mean Control Committee PMAS Arid Agric. University Sept. 2012-14</p> <p>Organized one day seminar on Application of Proteomics to Investigate Stress-induced Proteins on June 11 2012 Speaker was, Dr. Setsuko Komatsu from Japan.</p> <p>Head of Departmental Tenure Review Committee.(DTRC)</p> <p>Member of Tenure Review Committee Dept. Plant Sciences QAU Islamabad.</p> <p>Subject specialist for federal Public service commission.</p>
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	<p>Evaluation of applications for various positions at various universities.</p> <p>Paper setting for CCS examination for botanical discipline.</p> <p>Involved in Development/Revision of Syllabi for Central Superior Services(CSS) Competitive Examination 2012</p> <p>Reviewer for the evaluation of research projects of HEC and PSF.</p> <p>Papers reviewing of various national and international journals</p>
Memberships	<p>Member of Advisory Board of Ethnobotany Project, WWF.</p> <p>Member of Pakistan Ethnobotanical Society.</p> <p>Pakistan Botanical Society. Pakistan.</p>
Graduate Students, Postdocs, Undergraduate Students, Honor Students	<p>PhD : 11</p> <p>M.Phil : 25</p> <p>M.Sc : 15</p>
Service Activity	
Brief Statement of Research Interest	<p>Phytosociological aspects of vegetation and ethnic approach with reference to their utilization.</p> <p>Gene transformation</p> <p>Bioactivities and Chemical Characterization of medicinal plants</p>
Publications	<p>Book : 3</p> <p>Publication (Impact factor) : 49</p>
Research Grants and Contracts	<ol style="list-style-type: none"> <li>1. Ethnobotanical study of the Galliyat for botanical demography and bioecological diversification. Funded by University of Arid Agriculture, Rawalpindi, Pakistan. 0.1 million</li> <li>2. Ethnobotanical Study of Mountain Range of Kalla Chitta in Potohar Region , Pakistan Funded by WWF Pakistan. 0.4 million</li> <li>3. Exploration and Eco.Taxonomic Screening Of Fodder Grasses from Thal Desert ( Khushab) of Pakistan. 0.5 million</li> <li>4. Correlation of percentage disease resistance with level of gene expression in transgenic wheat with Xa 21 gene. 0.5 million</li> </ol>
Other Research or Creative Accomplishments	Nil
Selected Professional	Nil

Presentations	
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Experience	<p>1). Associate Professor From 14<sup>th</sup> December, 2010 to Date. Department of Botany Pir Mehr Ali Shah Arid Agriculture University Rawalpindi</p> <p>2). Assistant Professor From 23<sup>rd</sup> May, 2007 to 13<sup>th</sup> December, 2010 Department of Botany Pir Mehr Ali Shah Arid Agriculture University Rawalpindi</p> <p>3) Seed Certification Assistant (BPS-17) in Federal Seed Certification &amp; Registration Department from 4<sup>th</sup> January, 2002 to 22<sup>nd</sup> May, 2007.</p> <p>4) Research Associate in the Department of Botany, Shah Abdul Latif University Khairpur from 25<sup>th</sup> September 1998 to 31<sup>st</sup> December, 2001 (Sponsored by Pakistan Science Foundation Islamabad).</p>
Honors and Awards	<ol style="list-style-type: none"> <li>1. Elected as Vice President (Punjab) for the executive body/council of Pakistan Botanical Society for the session 2013-2015.</li> <li>2. Fellow of Royal Anthropological Institute, British Museum, London.</li> <li>3. Won award “Productive scientists of Pakistan” for the year 2012-13 by the Pakistan Council for Science &amp; Technology under category “E”.</li> <li>4. Won award “Productive scientists of Pakistan” for the year 2011-12 by the Pakistan Council for Science &amp; Technology under category “F”.</li> <li>5. Won award “Productive scientists of Pakistan” for the year 2010-2011 by the Pakistan Council for Science &amp; Technology under category “G”.</li> <li>6. HEC Recognized Ph.D. supervisor</li> <li>7. Member, Curriculum development of M. Sc. Botany/Biology at PMAS Arid Agriculture University.</li> <li>8. Member, Curriculum development of M.Sc./M. Phil./PhD of Botany/Biology at PMAS Arid Agriculture</li> </ol>

	<p>University.</p> <p>9. Member Selection Board, Federal Public Service Commission.</p> <p>10. Selected as jury for Intel Science Olympiad 2008-2009.</p>
Memberships	<p>1. Pakistan Botanical Society (Life Time).</p> <p>2. Pakistan Wildlife Society (Founder Member)</p> <p>3. Weed Science Society of Pakistan (Life Time).</p> <p>4. Latifian Green Globe Forum, Shah Abdul Latif University, Khairpur. (Life Time).</p>
Graduate Students, Postdocs, Undergraduate Students, Honor Students	<p>M.Phil : 31</p> <p>Ph.D (under supervision) : 08</p>
Service Activity	<p>1. Academic Council, PMAS-AAUR.</p> <p>2. Departmental Tenure Review Committee for TTS</p> <p>3. Board of Studies, Department of Botany.</p> <p>4. Board of Studies, Forestry &amp; Range Management Department, PMAS-AAUR since 01.11.2007 (as an external expert).</p> <p>5. Scrutiny committee of Botany, Plant Breeding &amp; Genetics, Mathematics &amp; Statistics, Horticulture and Wildlife departments for M. Phil. /PhD studies.</p> <p>6. Quality Enhancement Cell.</p> <p>7. Admission Committee for M. Sc./M. Phil.</p>
Brief Statement of Research Interest	<p>Plant Taxonomy</p> <p>Ethnobotany</p>
Publications	<p>Paper (Impact factor) : 61</p> <p>Paper (non-impact factor): 33</p>
Research Grants and Contracts	<p>1. Ethnobotanical survey of Thal Desert, Punjab Pakistan funded by Pakistan Science Foundation Islamabad (Three Years duration). (Principal Investigator).</p> <p>2. Floristic &amp; Ethnobotanical enumerations of Kallar Kahar Lake and its adjacent areas. 2010. Funded by Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi. (Principal Investigator).</p> <p>3. Floral Biodiversity of Khanpur Dam, District Hazara Khyber Pakhtunkhwa. 2010. Funded by WWF, Islamabad (Principal Investigator).</p> <p>4. Floristic Inventory of University Research Farm at Koont and its surrounding areas. 2008-2009. Funded by Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi (Principal Investigator).</p>

	<ol style="list-style-type: none"> <li>5. Floristic Study of Arid Zone (Desert- Nara Region) Sindh, Pakistan, Sponsored by Pakistan Science Foundation, Project No. S-SALU/ENVR (45) during 1998-2001 (as Research Associate).</li> <li>6. Environmental Impact Assessment for Seismic operation in East Qadan wari gas field (Nara Desert) with reference to the vegetation. 2001. Sponsored by Hagler Bailey Pakistan (Pvt.) Limited, Islamabad (Co-Principal Investigator).</li> <li>7. Environmental Impact Assessment for Seismic operation in Gamabt Block with reference to the vegetation. 2001. Sponsored by Halcrow Pakistan (Pvt.) limited, Islamabad (Co-Principal Investigator).</li> <li>8. Environment Impact Assessment Study of Sawan Wari (Nara Desert) for OMV Gas Company with reference to the vegetation. 2001. Sponsored by Hagler Bailey Pakistan (Pvt.) Limited, Islamabad (Co-Principal Investigator).</li> <li>9. Assessment of Natural Vegetation of Hingol National Park, Balchistan. 2005-2006. Sponsored by WWF-Pakistan. (1st and 2nd Phases) (Co-Principal Investigator).</li> <li>10. Assessment of Natural Vegetation of Taunsa Barrage. 2005. Sponsored by WWF-Pakistan (Co-Principal Investigator).</li> <li>11. Floral Base-Line Study of Khunjerab National Park, Northern Areas. 2006. Sponsored by WWF-Pakistan (Principal Investigator).</li> <li>12. Preliminary Baseline Study of Chotiari and Pai forest Ecosystems of the Indus For All Programme (IFAP). 2005 Sponsored by WWF-Pakistan (Co-Principal Investigator).</li> <li>13. Detailed Vegetation Assessment Study of Ketu Bundar, Kenjhar Lake Chotiari Reservoir and Pai forest Ecosystems of the Indus For All Programme (IFAP). 2006. Sponsored by WWF-Pakistan (Co-Principal Investigator).</li> </ol>
Other Research or Creative Accomplishments	NA
Selected Professional Presentations	



Name:	Dr. Abida Akram
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Experience	<p>1). Associate Professor From 28-05-2011 to date Department of Botany Pir Mehr Ali Shah Arid Agriculture University Rawalpindi</p> <p>2). Assistant Professor From 26-02-2005 – 27-05-2011 Department of Botany Pir Mehr Ali Shah Arid Agriculture University Rawalpindi</p> <p>3). Lecturer From 13-10-1996 - 25-02-2005 Department of Botany Pir Mehr Ali Shah Arid Agriculture University Rawalpindi</p>
Honors and Awards	List honors or awards for scholarship or professional activity
Memberships	Botanical Society of Pakistan Pakistan Phytopathological Society. Soil Science Society of Pakistan (UAAR-47)
Graduate Students, Postdocs, Undergraduate Students, Honor Students	M.Phil : 14 Ph.D (under supervision) : 03
Service Activity	List University and public service activities.
Brief Statement of Research Interest	Recent working on mcoflora, mycotoxins and mcotoxin management Strategies.
Publications	Paper (Impact factor) : 13 Paper (non-impact factor): 13

Research Grants and Contracts	<p>1).13-02-2012 Virulence analysis of <i>Xanthomonas campestris</i> pv sesame and <i>Pseudomonas syringae</i> pv sesame the casual organism of sesame (<i>Sesamum indicum</i> L.) bacterial blight. HEC Rs. 6,413,760/- (in progress)</p> <p>2). Screening of mycoflora and mycotoxins from some pulses of arid region. PMAS-AAUR Rs. 108000/- (Completed 2012)</p> <p>3). Molecular characterization of <i>Sclerotium rolfsii</i> Sacc. isolated from chickpea (<i>Cicer arietium</i> L.). Funded PMAS-AAUR Rs. 138,000/- (completed in 2009).</p> <p>4). Characterization to determine the adaptive role of dehydrins under drought stress in wheat (<i>Triticum aestivum</i> L.). ALP project PARC. Rs. 2.943 Million (completed in 2009).</p>
Other Research or Creative Accomplishments	NA
Selected Professional Presentations	

Name:	Dr. Noshin Ilyas
Personal:	Department of Botany, PNMAS-Arid Agriculture University Rawalpindi 0572032247 <a href="mailto:noshinilyas@uaar.edu.pk">noshinilyas@uaar.edu.pk</a>
Experience	22-02-2010 Lecturer Botany, PMAS-AAUR 01-01-2010 Assist Prof Botany, PMAS-AAUR
Honors and Awards	1. Gold medallist (M.Sc Botany) 2. HEC indigenous scholarship
Memberships	Pakistan Botanical Society
Graduate Students, Postdocs, Undergraduate Students, Honor Students	M.Phil : 09

Service Activity	<ol style="list-style-type: none"> <li>1. Member SAR team</li> <li>2. Member of QEC team of department.</li> <li>3. Faculty in charge for CMS</li> </ol>
Brief Statement of Research Interest	<ol style="list-style-type: none"> <li>1. Plant Physiology</li> <li>2. Plant Microbiology</li> </ol>
Publications	Paper (Impact factor) : 09 Book Chapter : 02
Research Grants and Contracts	Date Title Agency / Organization Total Amount Principal Investigator of HEC funded project “Exploration of Genetic Variations for Drought Tolerance in Wheat ( <i>Triticum aestivum</i> L) by Using Some Physiological and Biochemical Attributes”
Other Research or Creative Accomplishments	8 Accession numbers submitted at NCBI
Selected Professional Presentations	<p>Oral presentation at 11<sup>th</sup> National Meeting of Plant Scientist at GC Lahore on 23 to 25<sup>th</sup> Feb</p> <p>Oral presentation at 1<sup>st</sup> International Conference on Biotechnology and microbiology at Bara Gali.</p> <p>Bano A. and Ilyas N. 2009. Production of bioactive metabolites by <i>Rhizobium</i> and <i>Azospirillum</i> strains isolated from maize grown in various moisture regimes in field. International conference on Positive Plant Microbe Interaction in Relation to Plant Performance and Ecosystem Functions. United Kingdom.</p> <p>Oral presentation at 9th Biennial Conference Advances in Biochemistry and Molecular Biology held on 17-20 December, 2008.</p> <p>Poster presentation in International Conference of Plant Scientists[10<sup>th</sup> National Meeting of Plant Scientists] held on April 21 to 24, 2008.</p> <p>Poster Presentaion in the International Symposium on “Microbial Technologies for Sustainable Agriculture” Exploring the hidden potential of microbes held at NIBGE, Faisalabad-Pakistan from 12-16 March, 2007.</p> <p><u>G) Training Courses and Workshops Attended</u></p> <p>Participated in workshop “Training worshop on abiotic stress tolerance in plants ‘ by NIAB, 5 to 9 Sep, 2011.</p> <p>Participated in International Workshop on Climate Change</p>

	<p>and Sustainability of Agro-Environment: Challenges and Interventions held at PMAS AAUR on June 3-4, 2010.</p> <p>Participated as an organizer in 2nd International Seminar on Medicinal Plants (ISMP) held in Lahore College for Women University on Jan 14-16, 2010.</p> <p>Participated in 6<sup>th</sup> Annual National Training Course on Modern Techniques in Biotechnology held at National Institute For Biotechnology And Genetic Engineering(NIBGE), Faisalabab, 5-9 May, 2008.</p> <p>Participated in International Thematic Workshop on Biofertilizer Technology held at COMSTECH, Islamabad January 22<sup>nd</sup> -28<sup>th</sup>, 2008.</p> <p>Participated in the training course on ‘Nuclear &amp; other Techniques in Food &amp; Agricultural Research’ at Nuclear Institute for Food &amp; Agriculture(NIFA), Peshawar, from 12<sup>th</sup> November to 23<sup>rd</sup> November, 2007.</p> <p>Participated in International Symposium on Strategies for Crop Improvement Against Abiotic Stress, An Event of Centenary, Celebration, University of Agriculture, Faisalabad, 18-20 september, 2006.</p>
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Name:	Dr. Naveed Iqbal Raja
Personal:	Department of Botany, PMAS-Arid Agriculture University Rawalpindi +92-(0)313-5257004 <a href="mailto:drnaveedraja@gmail.com">drnaveedraja@gmail.com</a>
Experience	17-09-2010- to date Assist Prof Botany, PMAS-AAUR
Honors and Awards	HEC indigenous scholarship
Memberships	Pakistan Botanical Society
Graduate Students, Postdocs, Undergraduate Students, Honor Students	M.Phil : 04
Service Activity	Date Sheet incharge
Brief Statement of Research Interest	Plant biotechnology
Publications	Paper (Impact factor) : 06
Research Grants and Contracts	<i>Correlation of percentage disease resistance with level of gene expression in transgenic wheat with Xa21 gene. Donar agency: HEC, Worth: 0.5 Millions</i>

Other Research or Creative Accomplishments	Nil
Selected Professional Presentations	

Name:	Dr. Yamin Bibi
Personal:	Email: <a href="mailto:dryaminbibi@uaar.edu.pk">dryaminbibi@uaar.edu.pk</a> <a href="mailto:yamin.phd@gmail.com">yamin.phd@gmail.com</a> <a href="mailto:roshni_yamin@yahoo.com">roshni_yamin@yahoo.com</a> phone number: 03035712234
Experience	Contract: 09 month Regular (BPS-19): I year and 3 months Assistant Professor Department of Botany PMAS Arid agriculture University Rawalpindi
Honors and Awards	Gold Medalist (M.Sc. Botany) PhD Indigenous Scholarship of HEC IRSIP award for UK
Memberships	Pakistan Society for Microbiology
Graduate Students, Postdocs, Undergraduate Students, Honor Students	Nil.
Service Activity	
Brief Statement of Research Interest	1. Phytochemistry and biological evaluation of medicinal plants 2. Tissue Culture
Publications	Paper (impact factor) : 11
Research Grants and Contracts	Title: Biological and phytochemical investigation of some ethanobotanically important plants of Pakistan. Agency / Organization: HEC Total Amount 0.5 million Year : 2012

Other Research or Creative Accomplishments	NA
Selected Professional Presentations	Oral Presentation I n National Science Conference at PMAS arid Agriculture University, 10 <sup>th</sup> Jan to 12 <sup>th</sup> Jan, 2012. Poster presentation in British Pharmaceutical conference UK, 2009.

Name:	Mubashrah Munir
Personal:	H. No. 23 Mohammadi Mohallah Shahadarah More Lahore), 03445932221, mubjan@gmail.com
Experience	Lecturer deptt. of Botany, joined on 25-01-2006, PMAS- Arid Agriculture University Rawalpindi.
Honors and Awards	HEC indigenous Scholar (PhD) Availed IRSIP Scholarship awarded by HEC for training at USA
Memberships	Life member Pakistan Botanical Society
Graduate Students, Postdocs, Undergraduate Students, Honor Students	M.Phil : 03
Service Activity	Teaching, Research, Time Table incharge
Brief Statement of Research Interest	I am interested in algal taxonomy and ecology.
Publications	Paper (impact factor) : 04
Research Grants and Contracts	Date Title Agency / Organization Total Amount Research Project completed, entitled “ECOTAXONOMIC STUDY OF ALGAL FLORA FROM FEW AREAS OF POTHWAR REGION” funded by PMAS Arid Agriculture University Rawalpindi.Completed in 2010.
Other Research or Creative Accomplishments	Nil
Selected Professional Presentations	Nil

Name:	Saira Asif
Personal:	Dept. Of Botany PMAS-AAUR

Experience	23-09-2008- to date Lecturer PMAS-AAUR
Honors and Awards	Not Applicable
Memberships	Life time member of Pakistan Botanical Society
Graduate Students, Postdocs, Undergraduate Students, Honor Students	Not Applicable
Service Activity	Academics and Research
Brief Statement of ResearchInterest	Plant Tissue Culture and Gene Transformation
Publications	Paper (Impact factor) : 02
Research Grants and Contracts	Not Applicable
Other Research or CreativeAccomplishments	Not Applicable
Selected ProfessionalPresentations	Not Applicable

Name:	Zia-ur-Rehman Mashwani
Personal:	Department of Botany, PMAS-Arid Agriculture University Rawalpindi +92-(0)333-9022077 <a href="mailto:zia.botany@gmail.com">zia.botany@gmail.com</a> <a href="mailto:mashwani@uaar.edu.pk">mashwani@uaar.edu.pk</a>
Experience	10-02-2010- to date Lecturer PMAS-AAUR
Honors and Awards	<ol style="list-style-type: none"> <li>1. Excellent Paper award in International Conference on Environment, Biomedical and Biotech. (ICEBB 2011) by organizing committee held at August 19-20, 2011 in Shanghai, China.</li> <li>2. Received Travel Grant from HEC To Participate and Present a Research Paper in International Conference On Environment, Biomedical and Biotech. (ICEBB 2011) At Shanghai (China)</li> <li>3. Distinction (Merit) certificate from University of Peshawar, on securing 2nd position in M.Sc (Botany) from Department f Botany, with 870/1200(72.5%)</li> <li>4. Fauji Foundation Merit Scholarship</li> <li>5. Quaid-i-Azam University Merit Scholarship</li> </ol>

	6. Throughout first class academic carrier.
Memberships	Pakistan Botanical Society
Graduate Students, Postdocs, Undergraduate Students, Honor Students	M.Phil. : 06
Service Activity	<ul style="list-style-type: none"> <li>• Teaching and Research</li> <li>· Supervisor of the Six (06) M.Phil students</li> <li>· Member Quality Enhancement Cell Self-Assessment Team from the Department of Botany</li> <li>· Member Admission Committee for Biology and Botany Department .</li> <li>· Member supervisory Committee for different M.Phil students</li> <li>· Introduction and designing of new courses in the Department</li> <li>· Only Elected Member Executive Council (Faculty Representative, Sciences) of 1st Academic Staff Association, PMAS Arid Agriculture University, Rawalpindi (ASA-PMASAAUR)</li> </ul>
Brief Statement of Research Interest	Ethnopharmacology Plant ecology and taxonomy
Publications	Paper (Impact factor) : 06 Paper (non-impact factor): 03
Research Grants and Contracts	<p>Ecotaxonomic studies of the Grasses from Thal Desert Area of District Khushab, Pakistan. Co-Principal Investigator Funded by: Higher Education Commission, Pakistan (0.5 million) Diversity and Distribution pattern of Alpine vegetation along various alpine lakes in Western Himalaya. Partner: Pakistan Wetland Programme, Ministry of Environment, Govt. of Pakistan Evaluation of Antioxidant activities of the <i>Berberis lycium</i> Royle. Principal Investigator, Funded by: University Research Fund, PMAS Arid Agriculture University, Rawalpindi (0.128 million)</p>
Other Research or Creative Accomplishments	Nil
Selected Professional Presentations	<ul style="list-style-type: none"> <li>• Oral presentation in “First national conference on poverty alleviation through sustainable management of</li> </ul>



	<p>biodiversity in Pakistan” September 29-30, 2012 Bara Galli, Organized by Institute of Plant Sciences and Biodiversity, Uni. Of Swat and HEC.</p> <ul style="list-style-type: none"> <li>• Five abstracts published in proceeding of “12<sup>th</sup> National &amp; 3<sup>rd</sup> International Conference of Botany”, published by Pakistan Botanical Society.</li> <li>• Oral and Poster presentations in “12<sup>th</sup> National &amp; 3<sup>rd</sup> International Conference of Botany”, September, 1-3, 2012 at Quaid-i-Azam University, Islamabad</li> <li>• Oral presentation and abstract published in “National Science Conference, Roadmap to cutting edge technology”, January 10-12, 2012 at PMAS Arid Agriculture University, Rawalpindi</li> <li>• One day research workshop on “Citation &amp; Referencing in Research using EndNote X5” on 25<sup>th</sup> August 2011 jointly organized by Quality enhancement Cell (QEC) of PMAS-AAUR and Research Centre for Training &amp; Development, IRP.</li> <li>• Oral presentation in “2011 International Conference on Environmental, Biomedical and Biotechnology-ICEBB”, August 19-20, 2011 at Shanghai, China organized by APCBEES.</li> <li>• Abstract published National Conference on "Sustainable Agriculture in Changing Climate", July 07-09, 2011, Peshawar University campus Bara Gali (Abbottabad.) organized by Pakistan Agricultural Scientist Forum.</li> <li>• Oral presentation in National Symposium on Biodiversity of Pakistan to be held on June 7-9, 2011 at Hotel Margala, Kashmir Highway. Islamabad. Organized by Pakistan Museum of Natural History, Garden Avenue,</li> </ul>
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	<p>Islamabad.</p> <ul style="list-style-type: none"> <li>• Oral Presentation and abstract published in 3<sup>rd</sup> international Weed science Conference (April 18-20, 2011) at Department of Weed Sciences, Khyber Pukhtoonkhwa Agriculturae University Peshawar.</li> <li>• Oral Presentation and abstract published in International Conference of the Plant Scientists (ICPS-2011), at Department of Botany, GC university Lahore(February 22-24, 2011).</li> <li>• Oral Presentation and abstract published in three days International conference (December 29-31, 2010) on “Biodiversity is our Life(IC Biour-Life)” at Centre of Biodiversity and Conservation, Shah Abdul latif University (SALU), Khairpur.</li> </ul>
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