A framework for identifying an appropriate teaching style based on student feedback

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A framework for identifying an appropriate teaching style based on student feedback

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Abstract

Teaching and learning are the two sides of a coin or it is a mirror image of each other. The most accepted criterion for measuring good teaching is the amount of student learning that occurs. In the past our understanding was to measure teaching as the most important factor whereas at present the learning factor is the most important. Quality Curriculum, Quality Teaching and Adequate Resources are the elements which has the greatest influence on student learning. Research tells us what educators have long known "teaching quality is the essential component to raising student achievement". Hence, Quality Teaching is equal to Student Learning.

Quality teaching is keeping the audience (students) engaged throughout the lesson and the audience is provided the skills to apply the theories learnt in the classroom whenever needed. Unfortunately most of the teachers missing this valuable point and they practice the same teaching techniques with any audience regardless the audience level of expectations.

In order to achieve great success in delivering the lessons teachers should first understand the level of expectations of the audience. In order to do this it is recommended to obtain student feedback on appropriate teaching style. The student feedback encourage and support active engagement in the process, rather than imposing a standard way of doing things, and build on existing good practice identified across the academic community.

The objectives of this research is to identify appropriate teaching style by obtaining audience expectations and then customizing the teaching style accordingly. It helps to identify strengths and weaknesses of teaching, limitations of resources in carrying out the teaching program, improve teaching methods and effective use of teaching aid. This can also be used improve student performance.

Keywords: Teaching Methods & Techniques, Teaching Styles, Student Feedback, Student Performance

1.0 Introduction

Quality Assurance (QA) is an essential element that had gradually gained serious attention amongst the global Higher Educational Institutions (HEI). It must be a continuous and an on-going process. Stakeholder satisfaction is one of the most important aspects when we consider about quality. The important stakeholders can be identified as students, academic staff, nonacademic staff, employers, training organization, graduates, government, professional organizations, and parents, funding agencies, other interesting parties, administration and society. Most important key stakeholders are students, staff, administration and employers.

Every institute is accountable to its stakeholder in terms of the funds used on it. Concern for quality will ensure accountability of the funds utilized and inform the stakeholder about taking appropriate decisions. QA is a process of establishing stakeholder confidence that provision (input, process and outcomes) fulfils expectations or measures up to threshold minimum requirements
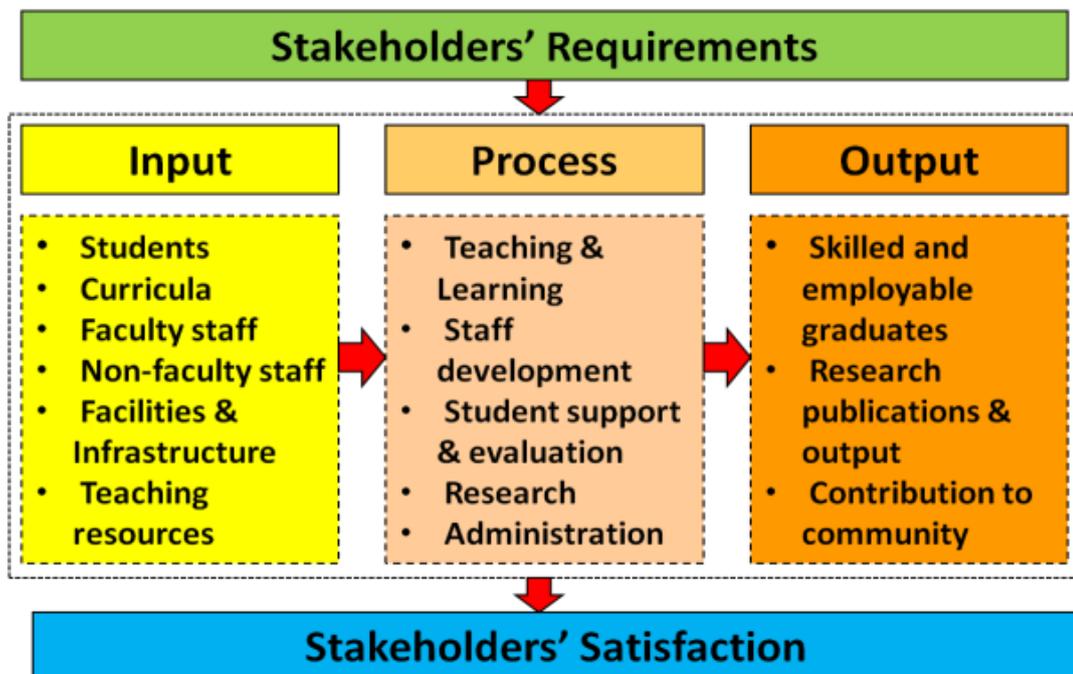

Figure 1 – Relationship between Stakeholders' Requirements and Satisfaction

Students want quality service and facilities which can make them as responsible and employable graduates. Academic staff wants better teaching and working environment with appreciation of work quality and benefit. Employers want quality graduates with knowledge, skills and attributes who can contribute to their organizational success. Government wants smooth functioning of the universities with the facilities provided by them.

The study is focused to increase student satisfaction in teaching and learning process while teachers are also keeping happy. Faculty Administrators and Internal Quality Assurance Unit (IQAU) of the Horizon Campus noticed that students' attendance is very poor (even some faculties' student attendance is less than 40%) and even some

faculty students are absent for quizzes and mid-term assessments. As a result the overall grading and pass rate were also not up to the standard. Overall student attendance percentages in 2016 (as of December 2016) of faculties of IT, Education, Management and Science are illustrated in figure 2.
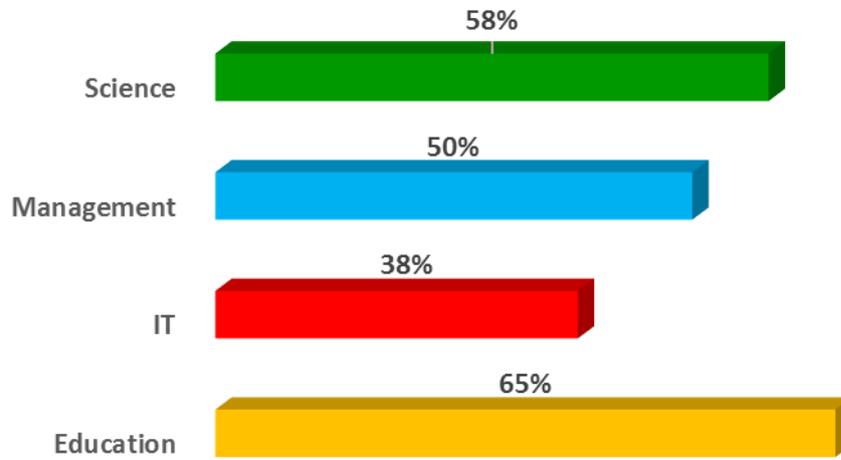

Figure 2 - Overall student attendance as of December, 2016

Preliminary survey was conducted by the IQAU to observe the reason/s for students' dissatisfaction. There are only four (4) questions in the questionnaire which is shown in figure 3.

Figure 3 - Questionnaire to observe the reasons for students' poor attendance

The survey outcome depicted that **nearly 85% of students selected Teaching/Academic Staff as the "First Reason"** and further they mentioned **due to the way of conducting lectures of some lecturers, students are not attending to the lectures.**

Hence, Academic and Administrative staff of the Horizon Campus paid attention to rectify the issue immediately as the Graduate students are the main stakeholder of any Higher Education Institution and Graduate Output is one of the Key Performance Indicators (KPI).

Feedback's scope and content are independent of any specific teaching style, yet fundamental to all. Feedback is generally defined as "telling people how they are doing." Such a simplistic definition ignores the magnitude and hypnotic power of feedback to affect performance and shape perceptions. Feedback is fundamental to the learning process for two primary reasons. All feedback (all assessment) serves to:

1. Reinforce or change subject matter, behavior, or logistics

2. Shape self-concept

Teacher Evaluation by Students (Student Feedback) is one of the good practices in higher education. The main objective of this process is to improve the effectiveness and quality of teaching in the academic program through helping the teachers to identify their strengths and weaknesses, identify the limitations of resources in carrying out the teaching program, and improve teaching methods and effective use of teaching aid. This can also be used to reward the teachers with excellent performance as an incentive to encourage others. The strengths and weaknesses of a given course/module indicated by the evaluation could be used as a guide in curriculum revision in the future.

The table 1 is illustrated the aims of teacher evaluation in teacher, student and university point of view.

Table 1 - Aims of teacher evaluation in teacher, student and university point of view.

Teacher	Student	University
▪ A means of feedback on teaching approach ▪ An opportunity to identify the achievements and weaknesses within a framework of constructive openness ▪ Accessible provision of practical help to overcome the weaknesses and improve instructions ▪ Formal acknowledgement and appreciation of abilities	▪ Opportunity to provide input regarding the effectiveness and weaknesses of the teacher without having a fear of being penalized	▪ Interchange of ideas between different levels of management ▪ Improved opportunities to coordinate various activities ▪ A means of identifying, acknowledging, communicating and sharing ideas on what constitutes effective performance ▪ Better identification of the goals and functions of the university ▪ Facilitation of target settings for

		departments in relation to organizational needs
and achievements and increase job satisfaction ▪ A deeper understanding of own responsibilities, relevance to the goals and functions of the department and the university. ▪ More accurate of perceptions of colleague's roles, responsibilities, competencies and capabilities ▪ For own carrier development		▪ A more open style – in which strength and weaknesses are permitted to be discussed ▪ Opportunity to provide input regarding the effectiveness and weaknesses of the teacher without having a fear of being penalized

Following aspects are mainly evaluated through the teacher evaluation process.

- Communication skills
- Organizational skills
- Enthusiasm
- Flexibility
- Attitude towards the students
- Teacher – student interaction
- Encouragement of the student
- Knowledge of the subject
- Clarity of presentation
- Fairness in grading and examinations
- Global student rating

By considering all these issues, the study is conducted to find an answer for, **what is the appropriate teaching style for a given audience?** while achieving following objectives.

- To understand audience learning needs
- To identify appropriate teaching style to match with required learning needs
- To improve students learning experience

2.0 Literature Review

Differentiated instruction means keeping all students in mind when developing lesson plans and workbook exercises, lectures and interactive learning. These student-focused differences necessitate instructional styles that embrace diverse classrooms for students at all learning levels and from various backgrounds without compromising the teacher's strengths. The most important thing is to engage with students in the learning process rather than entertain them. As teachers develop their teaching styles and integrate them with effective classroom management skills, teachers will learn what works best for their personalities and curriculum.

It is very difficult to find two teachers who teaches in a similar way. Even there are hardly found of two students who are having similar way of learning. A teacher's teaching style is based on their educational philosophy, their classroom's demographic and what subject area/discipline they teach. As a teacher it is very much important to know your teaching style and how it could be affecting your students. If you are a new teacher, you might be wondering what your teaching style is. Teacher-centered and student-centered are the two main approaches *(https://blog.udemy.com/teaching-styles/).*

According to the literature, there are five (5) teaching styles which were identified as pervasive in the classroom teaching as mentioned below:

A. **Expert:** Similar to a coach, experts share knowledge, demonstrate their expertise, advise students and *provide feedback to improve understanding and promote learning.*

B. **Formal authority:** Authoritative teachers incorporate the traditional lecture format and share many of the same characteristics as experts, *but with less student interaction.*

C. **Personal model:** *Incorporates blended teaching styles* that match the best techniques with the appropriate learning scenarios and students in an adaptive format.

D. **Facilitator:** Designs *participatory learning activities* and manages classroom projects while providing information and offering feedback to *facilitate critical thinking.*

E. **Delegator:** Organizes group learning, observes students, provides consultation, and *promotes interaction between groups and among individuals to achieve learning objectives.*

Teacher-Centered Approach

The main focus behind the teacher-centered approach is the idea that the teacher is the main authority figure. The students are simply there to learn through lectures and direct instruction, and the focus is mainly on passing tests and assessments. A teachers' role is to pass on the knowledge and information needed to their students in this approach. Direct instruction is used to define traditional teaching, which includes lectures and teacher-led demonstrations. The idea is that only the teacher can give students the knowledge and information they need to succeed. If this is your preferred style of teaching, you might want to consider taking a course in PowerPoint to create lectures.

There are three teaching models under this direction instruction as described in below table.

Formal Authority	Expert	Personal Model
These kinds of teachers are the sole person of authority and leadership. They have more knowledge than the students and hold a higher status over their students. Classroom management is usually based on traditional methods involving teacher-designed rules and expectations.	The teacher described in this model is basically the know-everything in the classroom. They are there to guide and direct their students. Students are nothing more than empty vessels designed to receive the knowledge being given by the teacher.	In this method, the teacher leads by example. They show the student how to find information and how to understand it. The idea is that the students will learn by watching and copying what the teacher does exactly as the teacher does it.

Student-Centered Approach

The teacher is still the authority figure, however the student plays an active role in what is learned. The idea is that the teacher will advise and guide the students down a learning path. Assessment involves informal and formal methods, tests, group projects, portfolios, and class participation. The teacher continues to assess a student's learning even throughout the lesson. The students are learning the information the teacher is giving, and the teacher is learning how best to approach his students. Inquiry-based learning and cooperative learning are mainly using in this approach.

a) Inquiry-Based Learning

This teaching style focuses on letting the student explore and actively participate in learning. Rather than being a dictator, the teacher is more of a guide, giving the students advice and supporting their efforts. Students are expected to participate and play an active role in their own learning. There are three models under this subcategory.

Facilitator	Personal Model	Delegator
A teacher using this model will work under an open classroom model. The idea will be to place a stronger emphasis on the teacher-student relationship by joining the student in the learning process. The students' progress will be loosely guided, and the teacher will work on encouraging the students to be more independent, more exploratory, and involve	This type of model is similar to the personal model from the direct instruction subcategory. However, these kinds of personal models are learning with the students so that they can learn to explore and experiment with new ideas. In this way, students can learn that making mistakes are part of the learning process as they watch their teacher make mistakes as well.	A delegator has the most hands-off approach of all of the modeled teaching methods. The idea is to encourage autonomy in the student's learning process. The teacher explains what is expected, gives them the resources needed, and spends the rest of the time acting as a resource of sorts. They will answer questions and check on progress when needed. The students are

more hands-on learning. Using this model, teachers can include less formal teaching strategies like encouraging students to be entrepreneurs.	They will, hopefully, also see that people can learn from their mistakes.	actively involved in their own learning process with no real guidance from the teacher.

b) Cooperative Learning

The idea behind this kind of teaching style is community. Much of the work in the classroom is group projects, and the students are responsible for their own learning and development. The theory behind this style of teaching is that students learn best when interacting with their peers. If all of the students are going to have access to technology either at home or at the school, you should consider a class in Microsoft Project so they can use it for their projects and portfolios. There are two models under this subcategory.

Facilitator	Delegator
This model is just like the facilitator model under inquiry-based learning. The only difference is that there is a higher focus on group projects rather than individual work. The teacher still uses an open classroom, and the focus is still on increasing a students' independence, hands-on learning, and exploration. However, instead of the student undergoing this process alone or with the teacher, he will also have a group of his peers joining him in the learning process.	Like the delegator model from the inquiry-based learning subcategory, this model acts as a resource to students with a hands-off approach to the students' learning. There is a higher focus on group projects compared to the inquiry-based learning delegator model, but overall, the same key ideas are behind both models.

Your teaching style states somewhat about you. It is based on your values toward education and the philosophy you hold about education. Knowing how your students learn can also play a key role in your teaching style. If you can discover your teaching style early on in your career, both you and your students will be better off for it. You will know exactly what your teaching preferences are and know just how to reach your students' learning preferences.

The way of influencing diversity classroom for teachers

It is clear that today's teachers are responsible for students with a diverse range of learning abilities. The 21st century teacher does not have the luxury of "picking the low-hanging fruit" and then leaving the rest of the tree for experts who specialize in children with behavioral issues or learning disorders.

Today's teachers must develop instructional styles that work well in diverse classrooms. Effective teaching methods engage gifted students, as well as slow-learning children and those with attention deficit tendencies. This is where differentiated instruction and a balanced mix of teaching styles can help reach all students in a given classroom, not just the few who respond well to one particular style of teaching (*http://education.cu-portland.edu/blog/teaching-strategies/5-types-of-classroom-teaching-styles/*)

Knowing how to engage students begins with selecting the teaching style that's right for you as a teacher though you may prefer one teaching style over another, you must find the style that works best for your students. Try different styles to meet different objectives, and always challenge yourself to find ways to reach each student.

Teacher Evaluation by Students

Classroom observations are the most common form of teacher evaluation and vary widely in how they are conducted and what are they evaluated. Observations can be conducted by a faculty administrators or an IQAU and they can measure general teaching practices or subject-specific techniques. They can be formally scheduled or unannounced and can occur once or several times per year. The type of observation method adopted, its focus and its frequency should be depended on what the administrations would like to learn from the process and how they addressed the issues.

Classroom observations provide a useful measure of teachers' practice but little evidence about whether students are actually learning. Though, if the observation instruments are based on valid standards of effective teaching practice, they can be used as a source of evidence about individual teacher's effectiveness. The degree to which observations can or should be used for specific purposes depends on the instrument, how that instrument was developed, the level of training and monitoring raters receive, and the psychometric properties of the instrument.

In the educational field, lessons' plans are considered windows into the level of preparation the teacher has to deliver and teach the lesson's content and objectives, and to manage classroom learning environment. No one can deny that lessons' plans are an important aspect of teaching and learning as it is attached to student learning. That is because students' learning is affected by the level of planning that links the learning objectives to the teaching activities, but it's important to remember that, as one of the teachers stated: "the lesson plan is just a plan, and once it is implemented in one class, it may need to be adjusted according to teacher's observation in the class, or adjusted to other class according to students' level of understanding, and learning abilities.

Many studies showed that there is a critical link between an effective teaching and students' academic achievement. Further it showed that good teachers don contribute positively, more than other less experienced or less skilled teachers, to their students' academic growth. That's why policy makers in the educational field should show more interest to better understand the effective teaching practices that leads to strong educational improvement and development. This is considered to be a challenging mission to address how to reliably measure teachers' performance with the goal of improving it, instead of frustrating or disappointing teachers, then getting the undesired results on the learning process.

In most of the higher education institutions still follow the traditional teacher evaluation methods with no creativity, or initiatives by the evaluators to improve it to be aligned with the new trends and concepts of education reforms and improvements. It is obvious that the evaluation system being adapted in those institutions is not encouraging and not linking teacher evaluation process to teachers' professional development. Not to mention the need to more efforts from the educational authority to organize and make these professional development opportunities available for teachers. As well as giving more authority to the Vice-Chancellors, Deans, Heads, IQAU and teachers to come up

with a well- planned evaluation process that takes into consideration the teachers' professional development needs.

3.0 Research Methodology

Quantitative research methodology is used in the research by identifying variables and inputs which are useful in the research. It is important to identify the suitable research methodology for the study.

Students will be asked to feedback the expected teaching style based on the following criteria.

Table 3: Operationalization of Teaching Evaluation

Measuring Criteria	Question number	Scale
Level of coaching , advising and guiding	Q1 – Q16	Likert 1 - 5
Use of whiteboard and long teaching session	Q17 – Q21	Likert 1 - 5
Sharing personal experience to teach	Q22 – Q31	Likert 1 - 5
Level of giving feedback to students to identify their mistakes	Q32 – Q35	Likert 1 - 5
Level of student discussion and peer learning	Q36 - Q40	Likert 1 - 5

With the help of literature the researcher construct the below framework with five (5) parameters that can be used to identify the most appropriate teaching style based on the students' feedback on teacher evaluation.

Table 4   - Parameters and scale for different teaching style

Parameter	Weight	Teaching style
Advice and coach students to understand the subject matters	Should be the prominent factor (>80% of total rating)	Expert
Traditional lecturing techniques with less student interaction	Should be the prominent factor (>80% of total rating)	Formal authority
Teaching with appropriate learning scenarios	Should be the prominent factor (>80% of total rating)	Personal model
Providing information and offering feedback to facilitate critical thinking	Should be the prominent factor (>80% of total rating)	Facilitator
Interaction between groups and individuals	Should be the prominent factor (>80% of total rating)	Delegator

Target population of the research is undergraduate students (252) of faculties of Management, Science and IT. Random Sampling technique is used in selecting sample for the research. It is essential to identify the sample size in order to conduct the research. Due to time constraint, researcher selected two batches from two faculties (Science and IT) that is 65 (N=65) as the sample.

Table 5 - Summary of sample profile

Faculty	Science	Science	IT	IT
Batch	Batch 1	Batch 2	Batch 1	Batch 2
Sample size	40 (Male=2, Female=38)		25 (Male=19, Female=6)	

Questionnaire technique is used to collect primary data (Teacher evaluation). There were 40 questions with 1-5 Likert scale questions.

4.0 Data Presentation and Analysis

This section illustrates, how collected data is analyzed to reach predetermined objectives and discussed the findings based on the results.

Table 6 - Data presentation for batch 1 - faculty of science:

	Level of coaching, advising and guiding	Use of whiteboard and long teaching session	Sharing personal experience to teach	Level of giving feedback to students to identify their mistakes	Level of student discussion and peer learning
Strongly Agree	400	160	120	120	120
Agree	160	0	0	0	40
Neutral	0	0	0	0	40
Disagree	0	0	280	0	0
Strongly Disagree	80	0	0	80	0
No of questions	**16**	**4**	**10**	**5**	**5**
Sample size	**40**	**40**	**40**	**40**	**40**

As per the collected data showed in table 4, from batch 1, faculty of science, the prominent factor out of the five factors is **"Level of coaching, advising and guiding"** and the acceptance is **87%.** According to the table 4 above, the matching teaching style is **"Expert".**

Table 7 - Data presentation for batch 2 – faculty of science

	Level of coaching, advising and guiding	Use of whiteboard and long teaching session	Sharing personal experience to teach	Level of giving feedback to students to identify their mistakes	Level of student discussion and peer learning
Strongly Agree	0	40	240	0	80
Agree	0	0	160	200	0
Neutral	480	40	0	0	0
Disagree	0	40	0	0	80
Strongly Disagree	160	40	0	0	40
No of questions	**16**	**4**	**10**	**5**	**5**
Sample size	**40**	**40**	**40**	**40**	**40**

Table 4 illustrates batch 2 in the faculty of science, the prominent factor out of the five factors is **"Sharing personal experience to teach"** and the acceptance is **100%.** According to the table 4 above, the matching teaching style is **"Personal model".**

Table 8 - Data presentation for batch 1 – faculty of IT

	Level of coaching, advising and guiding	Use of whiteboard and long teaching session	Sharing personal experience to teach	Level of giving feedback to students to identify their mistakes	Level of student discussion and peer learning
Strongly Agree	0	25	125	0	75
Agree	0	0	0	25	25
Neutral	50	0	0	0	25
Disagree	50	25	0	0	0
Strongly Disagree	100	50	125	100	0
No of questions	**16**	**4**	**10**	**5**	**5**
Sample size	**25**	**25**	**25**	**25**	**25**

As per the collected data from batch 1, faculty of IT the prominent factor out of the five factors is **"Level of student discussion, peer learning"** and the acceptance is **80%.** According to the table 4 above, the matching Teaching Style is **"Delegator".**

5.0 Discussion and Conclusion

It is very important to identify the requirements/expectations of the audience before conducting the lessons as most of the time audience requirements/expectations are not identified adequately in advance.

As pointed out in the analysis section, **batch 1 students** in the **faculty of science preferred traditional teacher centric learning style**. During the requirement identification survey, the audience has given significance attention on **coaching, mentoring and guiding techniques** than other criteria and also statistics showed that **87% majority** of the audience expecting the same. Therefore, it can be safely concluded that **"Expert" is the most appropriate teaching style for batch 1 students in the faculty of science.**

Batch 2 students in the **faculty of science preferred teacher-driven learning style**. During the requirement identification survey, the audience has given significance attention on **teacher's personal experience to teach** than other criteria and also statistics are shown that **100% majority** of the audience expecting the same. Therefore, it can be safely concluded that **"Personal model" is the most appropriate teaching style for batch 2 students in the faculty of science.**

According to the analyzed data, **batch 1 students** in the faculty **of IT preferred peer learning style.** During the requirement identification survey, the audience has given significance attention on **sharing, interaction among groups and discussion techniques** than other criteria. Statistics showed that **80% majority** of the audience expecting the same. Therefore, it can be safely concluded that **"Delegator" teaching style is the most appropriate teaching style for batch 1 students in the faculty of IT.**

It is fact that students' expectations/requirements on teaching style is the most important aspect to understand before delivering a lecture. Similarly, can keep the audience engage though out the session and produce better results. Further it will improve student learning experience. Therefore, it is recommended to conduct a preliminary survey to identify appropriate teaching style based on the student feedback before conducting lectures.

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Annex 1 – Questionnaire

TEACHER EVALUATION BY STUDENTS AT HORIZON CAMPUS

Faculty: ……….……….……….………   Batch: …………….

Gender: ……………………….

Please answer all questions by circling one out of numbers 1 - 5 against each statement.

A) Level of coaching, advising and guiding

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1) Facts, concepts, and principles are the most important things that students should acquire.	5	4	3	2	1
2) Lecturer set high standards for students in this class.	5	4	3	2	1
3) What lecturer says and does models appropriate ways for students to think about issues in the content.	5	4	3	2	1
4) Lecturers teaching goals and methods address a variety of student learning styles.	5	4	3	2	1
5) Sharing lecturers' knowledge and expertise with students is very important.	5	4	3	2	1
6) What lecturer has to say about a topic is important for students to acquire a broader perspective on the issues in that area.	5	4	3	2	1
7) Lecturer want students to leave this course well prepared for further work in this area.	5	4	3	2	1
8) Lecturer's responsibility is to define what students must learn and how they should learn it.	5	4	3	2	1
9) Examples from lecturers' personal experiences often are used to illustrate points about the material.	5	4	3	2	1

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
10) Developing the ability of students to think and work independently is an important goal.	5	4	3	2	1
11) Lecturer often shows students how they can use various principles and concepts.	5	4	3	2	1
12) Lecturer expertise is typically used to resolve disagreements about content issues.	5	4	3	2	1
13) This course has very specific goals and objectives that lecturer want to accomplish.	5	4	3	2	1
14) Lecturer's expectation is for students to do in the class are clearly defined in the syllabus.	5	4	3	2	1
15) There is more material in this course than the time available to cover it.	5	4	3	2	1
16) Lecturers' standards and expectations help students develop the discipline the need to learn.	5	4	3	2	1

B) Use of whiteboard and long teaching session

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
17) Lecturer typically show students how and what to do in order to master course content.	5	4	3	2	1
18) Small group discussions are employed to help students develop their ability to think critically.	5	4	3	2	1
19) Students design one of more self-directed learning experiences.	5	4	3	2	1
20) Activities in the class encourage students to develop their own ideas about content issues.	5	4	3	2	1
21) The lecturer's enthusiasm to upload course materials in the Learning Management System (LMS)	5	4	3	2	1

C) Sharing personal experience to teach					
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
22) Lecturing is a significant part of how the lecturer teach each of the class sessions.	**5**	**4**	**3**	**2**	**1**
23) Lecturer provide very clear guidelines for how I want tasks completed in this course.	**5**	**4**	**3**	**2**	**1**
24) Course activities encourage students to take initiative and responsibility for their learning.	**5**	**4**	**3**	**2**	**1**
25) Students can make choices among activities in order to complete course requirements.	**5**	**4**	**3**	**2**	**1**
26) Lecturer's approach to teaching is similar to a manager of a work group who delegates tasks and responsibilities to subordinates.	**5**	**4**	**3**	**2**	**1**
27) Students receive frequent verbal and/or written comments on their performance.	**5**	**4**	**3**	**2**	**1**
28) Lecture gives students negative feedback when their performance is unsatisfactory.	**5**	**4**	**3**	**2**	**1**
29) Lecture ask students' ideas about how to teach in this course.	**5**	**4**	**3**	**2**	**1**
30) Students set their own pace for completing independent and/or group projects.	**5**	**4**	**3**	**2**	**1**
31) Students might describe lecture as a "storehouse of knowledge" who dispenses the fact, principles, and concepts they need.	**5**	**4**	**3**	**2**	**1**

D) Level of giving feedback to students to identify their mistakes

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
32) Students take responsibility for teaching part of the class sessions.	5	4	3	2	1
33) Eventually, many students begin to think like the lecturer about course content.	5	4	3	2	1
34) Lecturer guide students' work on course projects by asking questions, exploring options, and suggesting alternative ways to do things.	5	4	3	2	1
35) Students might describe me as a "coach" who works closely with someone to correct problems in how they think and behave.	5	4	3	2	1

E) Level of student discussion and peer learning

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
36) Lecturer gives students a lot of personal support and encouragement to do well in this course.	5	4	3	2	1
37) Lecturer as the role of a resource person who is available to students whenever they need help.	5	4	3	2	1
38) Lecturer spends time with students on how to improve their work on individual and/or group projects.	5	4	3	2	1
39) Students would describe lecture's standards and expectations as somewhat strict and rigid.	5	4	3	2	1
40) Students typically work on course projects alone with little supervision from the lecture.	5	4	3	2	1

- Thank you -