

# ASSESSMENT IN FOCUS

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Assessment in Focus is dedicated to disseminate information and developments at the Testing Center, as well as to shed light on aspects of educational measurement and evaluation issues that would assist in the development and maintenance of up-to-standard and quality education at SMU, and similar higher learning institutions in Ethiopia.

## *Editor's Note*

Assessment in Focus is a biannually published newsletter devoted to giving highlights on educational affairs and progress of activities at the Testing Center of St. Mary's University. The most significant of all major activities at Testing Center of SMU is administering local and international tests based upon the request of organizations and institutions that need the assistance. These are: Test of English as a Foreign Language (TOFEL), Graduate Record Examination (GRE), Praxis Administration (PA), and Chartered Institutes for Securities and Employment Tests, all of which are in high demands with an increase in the number of customers. Besides, TC provides short term trainings to the staff of SMU and that of others based on demands to fill gaps aimed at improving the outputs rendered to their respective customers. In this issue, articles related to education and general knowledge for interested readers are included: These articles are:- "Why Higher Education Exit Exam (HEEE)", "Active learning at a Glance", "Theory of Scaffolding and Teaching Learning Process", "Enhancing Academic Achievement and Retention through Advanced Organizer Model (AOM)", "Enhancing School Discipline", "Characteristics and Quality of Services", and "Von Siemens Innovations". Assessment in focus publication also displays the services provided by the Testing Center and the University at large.

Have a good read!

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"Everybody is A GENIUS. But if you judge a fish by its ability to climb a tree, it will live its whole LIFE believing that it is STUPID."  
Albert Einstein



## **Some Selected Activities at the Testing Center (TC) of St. Mary's University (SMU)**

During the second half of the year 2023, different activities have been carried out by SMU's experienced professionals at TC. Some of these activities include the following.

- **Improving Outreach Services & Partnership**

To select efficient workers for different organizations, employment tests were prepared and administered to four job positions in Accountant, Finance Manager, and senior expert for Planning Project Management and Resource Mobilization.

- **Employment Test Progress at SMU**

To help customers become competent internationally, 39 test sessions of Test of English as a Foreign Language (TOEFL) were conducted. These sessions had a total of 224 registered candidates. Likewise, nine test sessions of Graduate Record Examination (GRE) for 41 registered candidates, five test sessions for eight registered candidates of Chartered Institute for Securities and Investment (CISI) and two sessions for two registered candidates of Praxis Administration were conducted.

- **Improving Quality of Assessment Tools**

To assure the completion of graduating students, HEEE mock and model exams were prepared and administered online for 2015 E.C prospective graduates of Accounting, Informatics, Management, Marketing and Tourism and Hospitality Departments for the regular program. The mock exams and study notes prepared by instructors were uploaded on Learning Management System (LMS).

Training was conducted for all Testing Center staffs with particular emphasis to "Internal Quality Assurance" of SMU. The training was conducted by the Director of CEIQA at SMU.



Training on internal quality assurance

- **Collaborative Activities with CODL Staff**

TC academic staff members participated in the tutorial program of CODL Degree of 2015-II. With this Testing Center's academic staff participants as tutors, were able to get basic perception about the actual CODL students.

- **Some Activities of Computerized Marking & Exam Administration and Distribution Units**

Computerized exam marking unit designed answer sheet, Marked and graded 2015-II CODL and UP exams. UP summer exams answer sheet design prepared, exam marked and 2015-III CODL answer sheet design prepared. In addition to this, scanning, verifying, marking, solving grade related problems, converting resigned employees' archives, converting scanned attendance sheet to PDF was done.

TC Exam Administration and Distribution Unit printed, and packed 2015-II and 2015-III CODL



Degree and High School Exams with their answer sheets and distributed to all CODL exam centers on time.

### **Why Higher Education Exit Exam (HEEE)?**

Dr. Wubishet Shiferaw, SMU, TC

Nowadays' decreasing quality of the training and education process of higher institutes, declining professional ability and motivation of teachers, the insufficient knowledge, skill and attitude level of graduate students against course profile, limited capability and organizational facility of higher institutions, low graduates qualification performance and improper allocation of public resources and its ineffective utilization are current problems challenging the education sector.

Carire I. and others believe that students' learning outcomes are the key factor of institutional performance and hence of an aggregate system performance. Interest on developing comparative measure of learning outcomes has increased in response to a range of higher education trends, challenges and paradigm shifts.

As a result of the policy debate of quality change, a shift of focus in assessment and growing recognition of the importance of learning outcomes illustrate a paradigm shift for higher education.

The reform areas that require special attention are curriculums, delivery and assessment methods, research and organizational leadership undertaking at higher institutions.

As part of improving the quality of education, it became necessary to use University Exit Exam to monitor and evaluate students' knowledge, skills and attitude before they receive their undergrad-

uate degrees. Exit exam is thus a comprehensive exam prepared and administered at the national level. Thus, it is compulsory for all students to sit before graduating from higher learning institutions. Pertinent to this, improving teaching methods and strengthening student's efforts to increase the value of graduate employment with sufficient knowledge, skills and attitudes are among the basic goals of exit exam policy.

The Higher Education Exist Exam (HEEE) aims to achieve the following:

- To ensure that first-degree graduates meet the graduate profile of the curriculum;
- To produce skills and competent man power to local, national and international market;
- To create conducive environment for stakeholders for their proper engagement in graduates' competency assessment;
- To assess students' educational achievement in the courses in their major area of program study.

### **Benefits of Exit Exam**

- It is used to raise student achievement and improve the quality of education;
- It improves the learning outcomes of students and their subsequent labor market performance;
- It may act as a common gateway to attain a license to the world of work;
- It can be used as a quality monitoring tool in the form of certification of competence for employment;
- It forces HEEIs to focus their time and resources on low achieving students they previously ignored;



- It can be used as source of information for policy decisions at national level

**Source:**

Seid Mohammed, (2022) Exit Exam administration and its premises in Ethiopia unpublished material  
Karine Tet al., (2012) Assessment of Higher Education Learning Outcomes Vol I.

**Active Learning at a Glance**

Senait Getahun, Ph.D Candidate, SMU

Active learning is one of the learning schemes that have prominently shaped the modern teaching learning process. It is a teaching method that involves students in the learning process, rather than passively listening to lectures. The idea that learning requires active engagement is an ancient one; however, many contemporary educational practices still rely on passive transmission of information from teachers to students. The term “active learning” and the related idea of “student-centered” learning became popular in the late 1970s and early 1980s; it is based on a “constructivist” philosophy, which suggests that knowledge is not simply transmitted between individuals, but is actively constructed by the learner through internal and external interactions (CEI, 2018; Cambridge.org;).

Active learning strongly suggests a student-based approach. It relies on the assumption that students learn more on their own experience and through that they can construct their own understanding of the complex world. Active learning can take many forms, such as discussions, debates, simulations, games, experiments, projects, and peer feedback. It is useful for students who want to deepen their understanding of the subject matter, develop critical

thinking and problem-solving skills. The teachers’ role in active learning is to encourage students to participate in different activities, the active participation of the students in the classroom and beyond broadens their understanding and thinking skills. Hence, the emphasis here is, ‘it is the activities of the learners, not the activities of their instructors, that result in learning’ (Dagnaw, 2019; Menistie, 2023; CEI,2018).

Cognizant of its advantages, active learning is a widely advocated method of instruction in many countries. Its emphasis is changing active teaching (teacher-centered instruction) to active learning because learners learn more when they participate actively in the learning/teaching process. The implementation of active learning in different disciplines such as Science, Technology, Engineering, and Math (STEM) and Language courses resulted in various encouraging outcomes. Nevertheless, in general active learning is known for the following key advantages (Nguyen, 2021 Dagnaw, 2019; CEI,2018):

- It increases student engagement and motivation by making them active participants in their own learning process.
- It improves critical thinking and problem-solving skills by challenging students to apply, analyze, synthesize, and evaluate information in different contexts;
- It develops collaborative skills and social interaction by fostering communication, cooperation, and feedback among students and instructors;
- It encourages risk-taking and creativity by providing a safe and supportive environment for students to experiment, explore, and ex-



press their ideas;

- It increases retention and transfer of knowledge by creating memorable and meaningful learning experiences that connect to prior knowledge and real-world situations; and,
- It makes technology more powerful by using it as a tool to enhance, not replace, active learning activities and strategies.

On the other hand, active learning also has its own drawbacks. Some of the key challenges one can face in the implementation of active learning are:

- **Time constraints:** Active learning activities may take more time than traditional lectures, and may reduce the amount of content covered in a course.
- **Group dynamics:** Active learning often involves group work, which may pose challenges such as unequal participation, conflict, or lack of accountability.
- **Student resistance:** Some students may prefer passive learning methods or feel uncomfortable with active learning activities.

In a nutshell, maximizing the advantages of active learning that would improve student retention and performance, foster collaboration and communication, and enhance student satisfaction and self-efficacy; and minimizing some of its disadvantages, such as requiring more time and effort from both instructors and students, challenges for classroom management and assessment, and potential causes of anxiety or frustration for some students who are not used to this approach needs careful design and implementation to suit the learning objectives, the characteristics of the students, and the context of the course.

#### Source:

Fekadu Dagne (2023). Center for Educational Innovation: An Assessment of the Implementation of Active Learning in Communicative English Language Classes at Kotebe College of Teacher Education.

Tilahun Mengiste, (2023). The Practices and Challenges to Implement Active Learning in North Wello, Weldiya Town Governmental Primary Schools

Ke vin.NGUYEN, et,al (2021). Instructor Strategies to Aid Implementation of Active Learning; A Systematic Literature Review

### Theory of Scaffolding and Teaching-Learning Process

Gezahegn Zewdie, SMU, TC

Vygotsky's scaffolding is a theory that focuses on student's ability to acquire information through the help of a more informed individual. When used effectively, scaffolding can help students to learn content they wouldn't have been able to process by their own. Maybin et al (1992) writes: [Scaffolding] is not just any assistance which helps a learner accomplish a task. It is intended to bring the learners closer to a state of competence which enables them accomplish tasks on their own. Mercer (1994), proposed the following criteria in distinguishing scaffolding from other kinds of teaching and learning:

- Students could not succeed without the teacher's intervention.
- The teacher aims for some new level of independent competence on the students' part.
- The teacher is familiar with some specific skills or concept in mind.

- There must be evidences that show students' success in accomplishing a particular task at hand.
- There must be evidence that learners are now able to go on to deal independently with subsequent related tasks or problems.

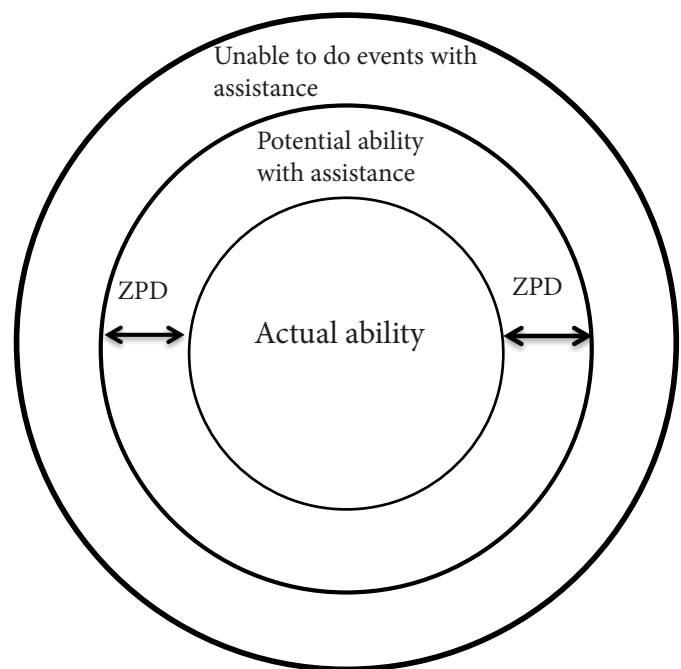
At the beginning of the scaffolding process, the teacher provides a lot of support. That support is then removed in stages. This gradual decrease in the level of support is what constitutes the scaffolding process. Step by step, this process imparts confidence and facility with the new concept or skill. The teacher can model the problem-solving process or present an approach for accomplishing a task. The teacher then supports students by:

- breaking the directions into small chunks
- talking students through the task while they complete it
- grouping students together to talk through the task and support each other
- referring to models of the task where students can gather additional information
- giving students tips and tricks while they are working

Instructional scaffolding is tied to the work of the psychologist Lev Vygotsky, who is well known for several important contributions to educational theory. Vygotsky coined the term, “zone of proximal development,” which is based on a student’s current developmental level and potential developmental level. To help a student learn a new task or concept, the teacher targets the student’s zone of proximal development and provides support that eventually tapers off as the student grows in knowledge and independence. The zone of proximal development

(ZPD) perhaps is best known and most relevant aspect of Vygotsky’s work. The theoretical basis of scaffolding is Vygotsky’s notion of the zone of proximal development (ZPD). Vygotsky argued that ZPD is a key element in the learning process; and he defined this as:

...the distance between the actual development level of the learner as determined by independent way of problem solving and the level of potential development as determined by problem solving under adult guidance or in collaboration with more capable peers.



ZPD shows the upper and lower limits, or the ‘zone’, within which new learning will occur. If the instruction is too difficult or pitched too high, the learner is likely either to be frustrated or to tune out. If it is too low, the learner is presented with no challenge and simply does not learn anything. The notion of the ZPD emphasizes on the merits of high support and high challenge for an effective teaching–learning



relationship. Learning occurs when students work within their ZPD and when teachers, through their mediating support role, are able to assist students to extend their current understandings and knowledge.

It is important to note that the concept of ZPD has been widely taken up in educational contexts, and often differently interpreted. Vygotsky points out; the place of the ZPD in his overall theories was not fully articulated. Some have interpreted ZPD as a kind of individual attribute — something that each learner possesses, that they take with them from one situation to another, and something that can be individually assessed. Others — and we include ourselves here — take a different view.

Wells (1999) argues that ‘rather than being a “fixed” attribute of the learner, the ZPD constitutes a potential for learning that is created in the interaction between participants as they engage in a particular activity together’. That is, ZPD is constructed in and through the activity in which learners and teachers jointly participate. Wells goes on to argue that as problems are resolved and solutions are constructed, so the potential for further learning is expanded, and new possibilities are opened up that were initially unforeseen. Thus, the ZPD is co-constructed through the talk that occurs between teachers and students as they participate in a particular task. It is an attribute of those tasks or events, rather than an attribute of the learner. This also means that the upper limits of the ZPD may change as the task unfolds. In other words, effective scaffolding extends the upper limit of the ZPD, perhaps making it possible for learners to reach beyond what they are thought to be capable of.

Vygotsky’s notion challenges the traditional concept of learner ‘readiness’ by suggesting that it is the teacher who is largely responsible for initiating each new step of learning, based on their understandings of what students are able to do. This does not mean that students’ own interests and goals are ignored; indeed, they are an important consideration at the macro level of program planning and identification of goals. However, it does mean that when introducing new concepts, the teacher is responsible for the sequencing and pacing of learning, and for challenging students to extend their current levels of understanding.

The notion of the ZPD also challenge teachers to maintain high expectations of all students, while providing ‘contingent’ scaffolding in order to assist learners to complete tasks successfully. Gibbons (2002) argues that, as far as possible, all learners, including second-language learners, need to be engaged with authentic and cognitively challenging tasks. It is the nature of the support — customized support that is responsive to the needs of particular students — that is critic.

**Source:** <https://www.dr-hatfield.com>

### **Enhancing Academic Achievement and Retention through Advanced Organizers Model (AOM)**

Desalegn Shanko, SMU, TC

Proponents of Information Processing theories presented how learning is enhanced through systematic design. Some of these are, John Dewey, Jean Piaget, Jerome Bruner, Albert Bandura and David Ausubel. Readers can explore the contribution of each psychologist to shaping learning. Subsequent developments



that base AOM include a similar strategy called concept mapping developed by Joseph D. Novack. All these theories converge how to enhance learning.

In this article we discuss about Advanced Organizer Model only. As the name implies advanced organizer is put certain concepts in advance to enhance learning. AOM is to provide basic terms or concepts that are new to the students and/or known concepts before a material is studied. The idea is equally useful to teachers and learners. The method is useful also to prepare students for examinations.

Advance Organizer Model is developed by David Ausubel who is one of the educational psychologists. This theory deals with three concerns in attaining meaningful verbal learning:-

- (a) How knowledge (curriculum content) is organized;
- (b) How the mind works to process new information (learning); and
- (c) How teacher can apply these ideas about curriculum and learning when they present new material to students (instruction). This model is designed to strengthen student's cognitive structure.

In this model, a teacher plays the role of an organizer of subject matter and presents information through lectures, readings and providing tasks to the learner to integrate what has been learned. The teacher is responsible for organizing and presenting what is to be learned. The learner's primary role is to master ideas and information. The Advanced Organizers provide concepts and principles to the students directly.

According to Ausubel whether the material is meaningful or not depends more on the preparation of the learner and the organization of the material than it

does on the method of presentation. A person's existing cognitive structure is the foremost factor governing whether new material will be meaningful and how well it can be acquired and retained. As per the views of Ausubel there is a parallel between the way subject matter is organized and the way people organize knowledge in their minds (their cognitive structures). Basically organizing and structuring the material is similarly helpful to cognitive structures. Components of Advance Organizer Model (as presented by David Ausubel).

(a) Syntax:

The Advance Organizer Model has three phases of activity.

Phase one is the presentation of the advance organizer that has different strategies like 1. Clarify aims of the lesson. 2. Present organizer:- a. Identify defining attributes b. Give examples c. Provide context d. Repeat 3. Prompt the awareness of learner's relevant knowledge and experience.

Phase two is the presentation of the learning task or learning material; which has tasks like 1. Present material. 2. Maintain attention. 3. Make the organization explicit. 4. Make logical order of learning material explicit.

Phase three is the strengthening of cognitive organization.

Phase three tests the relationship of the learning material to existing ideas to bring about an active learning process. This phase includes tasks like 1. Use principles of integrative reconciliation. 2. Promote active reception learning. 3. Elicit critical approach to subject matter. 4. Clarify.





The table below summarizes the aforementioned activities by phase so that the material is organized in schematic way.

Table 1: Summary of Phases of Advance Organizer Model

Phase	Outline	Activity
Phase one	Presentation of Advance Organizer	<ol style="list-style-type: none"> <li>1. Clarify aims of the lesson.</li> <li>2. Present organizer:               <ol style="list-style-type: none"> <li>a. Identify defining attributes</li> <li>b. Give examples</li> <li>c. Provide context</li> <li>d. Repeat</li> </ol> </li> <li>3. Prompt the awareness of learner's relevant knowledge and experience.</li> </ol>
Phase two	Presentation of learning Tasks or Material	<ol style="list-style-type: none"> <li>1. Present material.</li> <li>2. Maintain attention.</li> <li>3. Make organization explicit.</li> <li>4. Make logical order of learning material explicit.</li> </ol>
Phase three	Strengthening Cognitive organization	<ol style="list-style-type: none"> <li>1. Use principles of integrative reconciliation.</li> <li>2. Promote active reception learning.</li> <li>3. Elicit critical approach to subject matter.</li> <li>4. Clarify.</li> </ol>

(b) Social System:

In Advanced Organizer Model, the teacher retains control of the intellectual structure, to relate the learning material to the organizers and to help students differentiate new material from previously leads to the successful acquisition of material.

(c) Principles of Reaction: Negotiation of meaning and responses between the teacher and the learner clarifies the meaning of the new learning material with the existing knowledge of the students. Mutual interaction between teacher and learner responsively connect organizers and learning material. The teacher emphasizes the lesson through facilitation of learning by providing assignments step by step.

(d) Support System: The effectiveness of the advance organizer depends on an integral and appropriate relationship between the conceptual organizer and the content. This model provides guidelines for recognizing structural materials. It is also strengthened by creating student group study system with guided follow up of the teacher.

(e) Instructional and Nurturing Effects: The instrumental values of this model are – the ideas themselves that are used as the organizer are learned. The information presented to the students will be learned as main ideas, or guiding to explore more knowledge.

The following are some examples to systematize advanced organizer.

1. A teacher can present main topic so that students can write essays on a given topic

For example:

a) Cell Structure in biology or medicine can be presented to the students before they study the unit.

b) Exponential functions and the inverse of exponential functions can be presented as advanced organized before students learn the same topic or a new topic called logarithms (remem-



ber logarithm is expressed as inverse of exponential function).

2. A teacher can simply present a diagram, chart or a table for students to learn beforehand as the summary of the unit to be discussed.
3. Have you ever provided for a student before a course or a topic so that students read a priori? Please try this method it helps your student learning significantly.
4. If you are a student, try to study (self-study) the main themes of the subject matter through AOM; it definitely helps to master the material.
5. The methodology will help to strengthen student support groups.

## References

1. <http://gaveshnaa.blogspot.com/2014/12/advance-organizer-model.html>
2. <https://www.uis.edu/ion/resources/oiai/concept-mapping>.
3. <https://sites.temple.edu/edvice/2022/04/06/advance-organizers-setting-the-stage-for-learning-and-retention/>

## Enhancing School Discipline: Tips for Teachers and Management

Degefa Burayou, SMU,TC

Discipline is a bridge between goals and accomplishment. It also plays an essential role in keeping up a healthy social life. Thus, discipline in social life helps to eliminate hindrances for growth and other confusions that stand in the way to success. In this regard, schools play an important role in character development and shaping behavior since discipline

in school is pivotal and of a paramount importance. Now, what is discipline in school? School discipline is an arrangement of specific implicit rules, conduct, and behavior for keeping students in checking and making them efficient individuals. In addition, in order to make the teaching- learning process effective and useful, the classroom environment must be an ideal place because discipline helps to create a healthy classroom that ensures peaceful learning that works both ways.

There are 10 ways to improve and maintain discipline in school. Discipline in schools for students can be tricky to tackle but with these 10 tips, you can control it to some satisfactory extent.

### 1. Ensure that there is routine activity and a rhythm in classroom.

This way, the students know what is expected from the class and what is expected out of class.

On the off- chance that there is no legitimate planning and proper organization in the classroom; kids will feel frustrated and would begin to act mischievously. So, you will see that classroom management is easy and better when the lessons are appropriately planned.

Have everything that you need for the class beforehand; and in addition to this, while conducting classes, have a backup class always.

Consider the things that can go wrong; and have a plan B in place to make sense of the framework that you had in mind.

It is ideal to manage issues that spring up be-



fore they become too enormous to even consider handling. You can address every single little issue that occurs in the classroom.

This might be difficult in the beginning; but, students need to feel that they are valued and listened to; otherwise, they will cook up more mischiefs to attract attention. Handle problems tactfully. So, be careful that a tiny slip over disciplinary issues can turn into a huge problem on the shoulder later on.

### **3. Establish proper procedures**

The school should have a decent, control procedure to keep the students in check. A proper code of conduct, rules, and regulations must be followed. Here, one thing that schools should keep in mind is to strike the right balance. Be not to be too strict because there is a chance of students becoming rebellious; and that is the last thing that you need. Adopt the method controlled freedom both in classrooms and in the school altogether.

### **4. Explain the rules**

Next to establishing the right procedures, the most important thing is to communicate the procedure to your students in a manner that they must know what is expected of them so that they can do it accordingly. Conduct orientation classes; explain the rules and regulations, and how you expect them to behave within the classroom; within the school; and as a responsible adult. Refrain from making students feel like superior to the other students.

### **5. Practice what you preach**

The teachers, staff, management, and everyone within the school must practice the code of conduct that has been established by the school. As mentioned before, discipline in school can be tricky. Students are vulnerable and are at an age where they are just beginning to learn what is right or wrong. They look up their teachers and elders. So, if there is a rule that says no phones in the classroom, the teacher should refrain from taking phones to the classroom. Now that classes have moved online, you cannot say no to phones; but you can say no to phone calls and texting; and the teacher should adhere to the same norm.

### **6. Make your class interactive**

When you make your classes interactive, student engagement is better and they have less time to be mischievous. Make your classes interesting and engaging by including games, quizzes, animations, visual aids, and likewise. While teaching online, it is easier to incorporate animated videos and games with numerous online teaching tools available.

### **7. Establish a connection with your students**

When you create a good rapport with your students, they will more be disciplined and understanding. Thus, mutual respect will help in bringing about harmony in your classroom.

### **8. Reward good behavior**

When you reward good behavior in the classroom, you are equally encouraging other students to behave better. They would put in an effort to become a better student and be disci-



plined. You create a chart; reward them with stars; and in higher classes, you can change the rewards accordingly.

### 9. Be fair

As a teacher, you should not be prejudiced or biased; you have to be fair. It is okay to have favorites but do not be evident about it. You should not involve favoritism while grading papers and assignments. Be fair and ensure your students that efforts and growth matters and failures are just a stepping stone to success.

### 10. Be optimistic

Having a positive attitude can help with discipline in school. Students must not feel hostile in the classroom. They must feel at ease and that they have room for expressing themselves because being positive will help teachers to achieve this in the classroom.

Thus, you should focus on being fair and bringing up a generation that understands values.

**Source:** [blog.teachmint.com](http://blog.teachmint.com)>discipline-in-s...

## Characteristics and Quality of Services

Asres Mekuriaw, SMU, TC

In this piece of writing, we shall see some important points regarding the characteristics and quality of services. First, let's see the characteristics of a service in brief.

- There are five main service characteristics: intangibility, inseparability, variability, perishability and lack of ownership.

### 1. Intangibility

Service intangibility means that services cannot be readily displayed; so, they cannot be seen, tasted, felt, heard or smelt before they are bought. A buyer can examine in detail before purchasing the color, features and performance of an audio hi-fi system that he or she wishes to buy. In contrast, a person getting a haircut cannot see the result before purchase. Airline passengers have nothing but a ticket and the promise that they and their luggage will arrive safely at the intended destination, hopefully at the same time. Because service offerings lack tangible characteristics that the buyer can evaluate before purchase, uncertainty increases. To reduce uncertainty, buyers look for 'signals' of service quality. They draw conclusions about quality from the place, people, equipment, communication material and price that they can see. Therefore, the service provider's task is to 'manage the evidence' – they try to make the services tangible to provide concrete evidence of the benefits offered.

### 2. Inseparability

Physical goods are produced, put into inventory, distributed through multiple intermediaries; later sold to users; and still later, consumed. In contrast, services are first sold; then, produced and consumed at the same time and in the same place. Service inseparability means that services cannot be separated from their providers, whether the providers are people or machines. If a service employee provides the service, then, the employee is a part of the service. Because the customer is also present as the service is produced, provider– customer interaction is a special feature of services marketing. Thus, it is important for service staff to be trained to interact well with clients.



A second feature of the inseparability of services is that other customers are also present or involved. The concert audience, students in the class, other passengers in a train, and customers in a restaurant, all are present while an individual consumer is consuming the service. Their behavior can determine the satisfaction that the service provides to the individual customers. Because of the simultaneity of service production and consumption, service providers face particular difficulty when demand rises.

### **3. Variability (heterogeneity)**

As services involve people in production and consumption, there is considerable potential for variability. The quality of services depends on who provides them, as well as when, where and how they are provided and this is what we mean Service variability. As such, service quality is difficult to control. The ability to satisfy customers depends ultimately on the behavior of frontline service employees. A brilliant marketing strategy will achieve little if they do their job badly and deliver poor-quality service.

### **4. Perishability**

Service perishability means that services cannot be stored for later sale or use. Some dentists and general practitioners charge patients for missed appointments because the service value existed only at that point and disappeared when the patient did not show up.

### **5. Lack of ownership**

When customers buy physical goods, such as cars and computers, they have personal access to the product for an unlimited time. They actually own the product. They can even sell it when they no longer wish to own it. In contrast, service products lack

that quality of ownership because service consumer often has access to the service for a limited time. Because of the lack of ownership, service providers must make a special effort to reinforce their brand identity and affinity with the consumer using one or more of the following methods: They could reinforce the service brand identity and affinity with the customer. They could offer incentives to consumers to use their service again, as in the case of Frequent-flyer schemes, they could create membership clubs or associations to give a sense of belonging and ownership.

### **Service Quality**

According to (Grönroos, 2004), the concept of 'service quality' began to receive significant attention in the early 1980s and identified ten dimensions of service quality; they are:- reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/knowing the customer, and tangibles. However, these dimensions are reduced to five dimensions that are: reliability, assurance, tangibles, empathy. Service Quality is a qualitative factor that is extremely difficult to standardize. However, most studies have concluded that service quality has a definite bearing on customer satisfaction. Service quality is defined as the degree of discrepancy between customers' normative expectations for service and their perceptions of service Performance.

To develop effective strategies that lead to increased level of satisfaction and customer loyalty, companies need to know how quality affects the satisfaction level, its role and cost to assess the customer value and its relationship with customer satisfaction. Delivering quality service is considered an essential



strategy for success and survival in today's competitive environment. Defining service quality is difficult than defining goods quality because of three characteristics of service –intangibility, heterogeneity & inseparability

First, most services are intangible because they are performance rather than objects. Most services cannot be counted, measured, inventoried, tested and verified in advance of sale to assure quality. Second, services are heterogeneous; their performance often varies from producer to producer from customer to customer and from day to day. Consistency to behavior from service personnel (i.e. uniform quality) is difficult to assure because what firms intended to deliver may be entirely different from what the customer received. Third, service inseparability means that the production and consumption of a service can't be separated from the provider of that service. It also requires that a customer is physically participating in the consumption of the service.

General Service quality suggests three underlining themes:

1. Service quality is more difficult for consumer to evaluate than good quality.
2. Service quality perceptions result from a comparison of consumer expectations with actual service performance.
3. Quality evaluations are not made solely on the outcome of service; they also involve evaluations of the process of service delivery keeping in mind the previously mentioned studies.

## References

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## Werner Von Siemens' (1816-1892) innovation of Telegraph and its Contribution to the upheaval of the World's Civilization

Contributed by \_ Wondwosen Shimelis, SMU, TC

Ernst Werner Siemens was born in Lenthe, today part of Gehrden, near Hannover, in the Kingdom of Hanover in the German Confederation, the fourth child (of fourteen) of a tenant farmer of an old family of Goslar and his wife on 13 December 1816 in Lenthe near Hanover. He was a brother of Carl Heinrich von Siemens and Carl Wilhelm Siemens, sons of Christian Ferdinand Siemens and wife Eleonore Deichmann. He was married twice: first in 1852 to Mathilde Drumann (died 1 July 1867), the daughter of the historian Wilhelm Drumann; second in 1869 to his relative Antonie Siemens (1840–1900). His children from first marriage were Arnold von Siemens and Georg Wilhelm von Siemens, and his children from second marriage were Hertha von Siemens (1870– 5 January 1939), married in 1899 to Carl Dietrich Harries, and Carl Friedrich von Siemens.

After finishing School, Siemens intended to study at the Bauakademie Berlin. However, since his family was highly indebted and thus could not afford to pay the tuition fee, he chose to join the Prussian Military



Academy's School of Artillery and Engineering, between 1835 to 1838 for three years; instead, he received his officers training. Siemens was thought of as a good soldier, receiving various medals, and contributing to the invention of electrically-charged Siemens, which were used to combat a Danish blockade of Kiel. Siemens observed that, rapid reliable communication was important to the military. In 1847 Siemens constructed a pointer telegraph that was a great improvement on previous equipment. After this early success, Siemens and the master mechanic Johann Georg Halske founded the Siemens & Halske Telegraph Construction Company in Berlin in 1847.

After that, Siemens left the army in 1849 in order to devote himself to the company. Upon returning home from war, he chose to work on perfecting technologies that had already been established and eventually became known worldwide for his advances in various technologies. He further investigated the electrostatic charges of telegraph conductors and their laws; and established a method for testing underground and submarine cables allocate faults in their installation. Siemens carried out observation and experiments on electrostatic induction and the retardation it produced in the speed of a current. He devised an apparatus for the two fold and simultaneous transmission or reception of two independent signals as well as automatic records. The Siemens exertion becomes real; he invented an advanced telegraph that used a needle to point to the right letter, instead of using Morse code. Siemens's name has been adopted as the SI unit of electrical conductance, the Siemens. He founded the electrical and telecommunications conglomerate Siemens and invented the electric tram, trolley bus, electric loco-

motive and electric elevator.

On the contrary, He was a brilliant inventor and visionary entrepreneur. Revolutionary changes, including industrialization, marked all spheres of life during Siemens's era. Germany was transformed, especially in the second half of the century, from a still largely agrarian country into one of the world's leading industrial nations. Even as the political and economic conditions of the age provided a fertile environment for the successful expansion of the young company, Siemens & Halske, the inventions of Werner von Siemens and the economic activity of the company he founded also shaped their age.

Another task which took up a good deal of his was the contribution of a selenium photometer, an instrument for measuring luminous intensity or luminous flux. Siemens claimed in 1866 to have discovered the principle of self-excitation in dynamo-electric machine. This invention was also reached independently and almost simultaneously by two other men: S.A Varley and Sir Charles Wheatstone of England.

Although today, it is no surprise that private industry should account for many contributions to telecommunications; this was not true during 19th century. Then, much research was done by professors working out of universities, or other individuals working in the privately home laboratories. The Siemens and Halske Company represented one of the first firms to capitalize on inventive genius in the area of telecommunications. As co-owner of the firm of Siemens and Holske, he devoted his energies to making the company one of the most important practical undertaking in the world with branches in several countries. Its success was not contained to



yesteryear, for today over one hundred years from its founding date, the Siemens and Holske Company is one of the largest electronic firms in all of Europe. The company was internationalized soon after its founding. One brother of Werner represented him in England (Sir William Siemens) and another in St. Petersburg, Russia (Carl von Siemens), he earning recognition from each.

In addition to his technical innovations and daring business undertakings, Siemens adopted social initiatives that gave him a reputation as a progressive. He introduced the stocktaking bonus in 1866, far ahead of his time. With this system, he gave the employees of Siemens & Halske a share of the jointly achieved profits in addition to their regular earnings. In 1872, more than a decade before the introduction of statutory requirements governing provisions for pensions and surviving dependents, he founded a company of pension's scheme. He saw such measures as a means of reinforcing employees' loyalty to the company and described this mixture of paternalistic responsibility and entrepreneurial calculation as "healthy self-interest."

Siemens was not only a Germany electrical engineer, inventor and an industrialist but also a politician, serving as a member of the Prussian state assembly from 1862 to 1866 as an elected representative of the German Progressive Party (Deutsche Fortschrittspartei). He became a member of the Reich Patent Office in 1877 to secure the continued protection of patents. The Electrical Engineering Society, which he helped found in 1879, encouraged technical universities to introduce electrical-engineering programs. Siemens was a successful entrepreneur not only because he discovered fundamental technical principles, but also because he considered the

whole process from invention to marketable product and system solutions. Siemens was frequently honored for his services to both science and society during his lifetime and was raised to the nobility by Emperor Frederick III (r. 1888) in 1888. Although he officially retired from the business in 1890, Siemens still had an important influence on his company until his death on 6 December 1892.

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For a brief time in the 1850s, the telegraph companies of England and the United States thought that they could (and should) preserve every message that passed through their wires. Millions of telegrams - in fireproof safes. Imagine the possibilities for history!

James Gleick

The major advances in speed of communication and ability to interact took place more than a century ago. The shift from sailing ships to telegraph was far more radical than that from telephone to email!

Noam Chomsky





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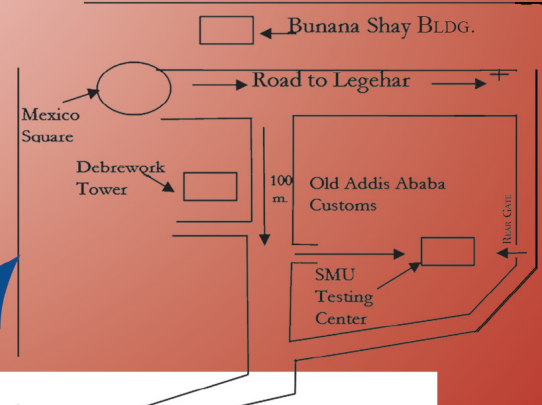
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