

# Excelssior Education Society's K. C. College of Engineering and Management Studies and Research (Affiliated to the University of Mumbai) MithBunder Road, Near Hume Pipe, Kopri, Thane (E)-400603

# **Department of Electronics and Telecommunication**

#### A.Y. 2022-23

Sr.No.	Name of faculty	Sem	Class	Subject	Methodology used
1	Ms.Riya Pal	III	S.E. EXTC	Electronic Devices and Circuit	PPT Presentation
2	Dr.Rajiv Iyer	III	S.E. EXTC	Digital System Design	Research Paper review
3	Ms. Paurnima Vadak	IV	S.E. EXTC	Principles of communication Engineering	Teach and learn activity
4	Ms. Shubhangi Verulkar	IV	S.E. EXTC	Microcontroller	Poster making
5	Dr. Aarti Bakshi	V	T.E. EXTC	Data Structure and Algorithm	PowerPoint Presentation on applications of applications of data structure and algorithm.
6	Mrs.Sushma Kore	V	T.E. EXTC	Digital Communication	Power Point Presentation on use of digital communication in latest technologies.
7	Dr. Aarti Bakshi	V	T.E. EXTC	Discrete Time Signal Processing	Screen Casting
8	Ms. Sushma Kore	VI	T.E. EXTC	Computer Communication Network	Review on research paper on "Design of wearable antenna in Wireless Body Area Network"
9	Mrs. Sushma Kore	VII	T.E. EXTC	Internet Communication Engineering	Open book
10	Mrs. Anupama Chaurasia	VII	B.E. EXTC	Microwave Engineering	Poster Making Assignment
11	Dr.Rajiv Iyer	VII	B.E. EXTC	Cloud Computing and Security	Research Paper review
12	Mrs. Anupama Chaurasia	VIII	B.E. EXTC	Augmented and virtual Reality	Certification course and Think-pair-share activity.



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# **Department of Electronics and Telecommunication**

Class: SE (EXTC) Academic year (2022-23) SEM: III

Name of Faculty: Asst. Prof Riya Pal

Sub: EDC

Methodology followed: Google Meet, Google Classroom, PPT And Classroom Teaching Offline

**Difficulty faced:** Students faced difficulty sometimes with internet issues

New method identified: PPT Presentation

**Activity report**: Screen presentation provides learners "a student-centered and engaging learning" experience. This kind of technique enable teachers to put his/her knowledge on PPT in a more broader way by inserting images, videos of such contents which sometimes becomes impossible to show students in reality in the classroom. A major benefit of this is - the viewer can go through the PPT content at a time when it's best for them because learning doesn't always take place in an academic setting. Additionally, the viewer can absorb the information at their own pace.

Students can use Screen casting to explain what they know in their own words. The students can record a video on explaining the steps of difficult numerical or summarizing a concept.

There are many ways we can use this method in our teaching field/process -

- Answer a question
- Record a lecture
- Demo (images as well as videos) how to use an application



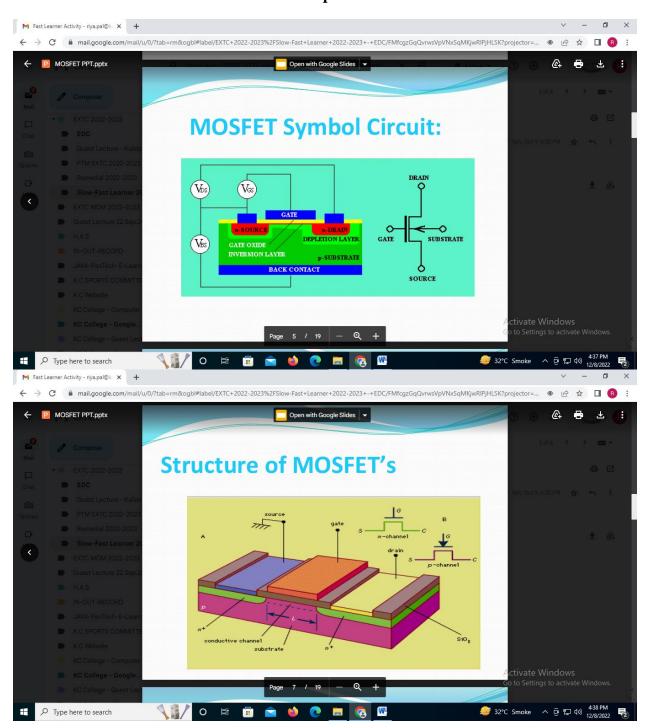


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#### **Sample PPT:**





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### **Department of Electronics and Telecommunication**

Class: SE (EXTC) Academic year (2022-23) SEM: III

Subject: Digital System Design

Subject In-charge: Dr. Rajiv Iyer

**Activity:** Research paper review

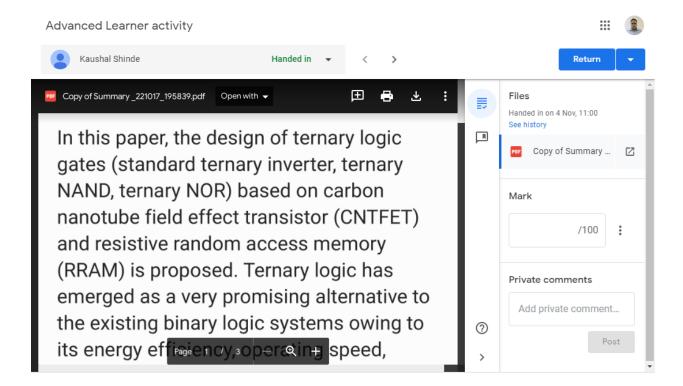
**Activity Report:** Identified advanced learners were asked to review a research paper on cloud computing. This helped them to get ahead of other learners to explore the latest research material which is not part of their curriculum.

The research paper titled 'Carbon Nanotube and Resistive Random Access

Memory Based Unbalanced Ternary Logic Gates and Basic Arithmetic Circuits' written by authors Furqan Zahoor ,Tun Zainal Azni Zulkifli ,Farooq Ahmad Khanday and Sohiful Anuar Zainol Murad. In this paper, the design of ternary logic gates (standard ternary inverter, ternary NAND,

Ternary NOR) based on carbon nanotube field effect transistor (CNTFET) and resistive random access memory (RRAM) is proposed.

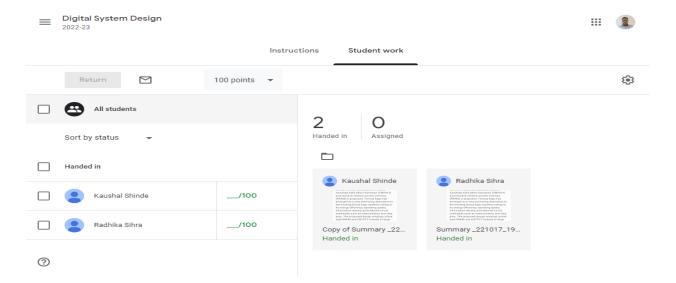
**Outcome:** Summarizing will ensure that students have had a productive and successful study session. Summarizing is like panning for gold—it helps you look for and find the main points and key details in every paragraph. Effective learning is all about identifying and understanding main points and key details.





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# **Department of Electronics and Telecommunication**

Class: SE (EXTC) Academic year (2022-23) SEM: III

Name of Faculty: Paurnima Vadak

Subject: NT

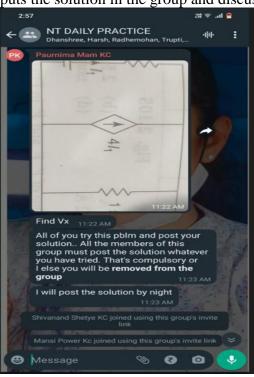
**Methodology followed**: Solving one problem daily and discussion in group at the end of the day.

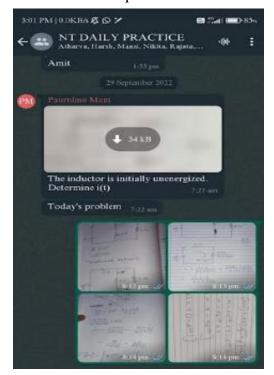
**Difficulty faced:** For numerical based subject problem solving practice is most important. They lack consistent practice which results in fewer score.

New method identified: ONE PROBLEM PER DAY

#### **Activity report**:

In this activity a common platform in the form of whatsApp group was created with the name NT Daily Practice. Subject Teacher used to put one problem before 8 am in the morning each day. The students solve the problems and put the solution in the group. At the end of the day after 8 pm teacher puts the solution in the group and discussion on the solution if required is done.





**Outcome**: This activity improved the student's learning process as they were practicing the problems daily and consistently.



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# **Department of Electronics and Telecommunication**

Class: SE (EXTC) Academic year (2022-23) SEM: IV

Name of Faculty: Shubhangi Mangesh Verulkar

**Sub: Microcontroller** 

**Methodology followed**: PPT, Google classroom, Physical room

Difficulty faced:

**New method identified**: Poster Making.

**Activity report**: It was a great opportunity to watch these young minds creating and displaying their ideas on paper and crafts. The students thoroughly enjoyed the activity. Posters offer plenty of white space for attention-grabbing imagery, so take full advantage of it! Upload colorful, high-resolution images so that viewers can immediately get a sense of what you're offering. If you don't already have images in mind, choose from our built-in library of free professional stock photos.

There are many ways we can use screencasting in our teaching.

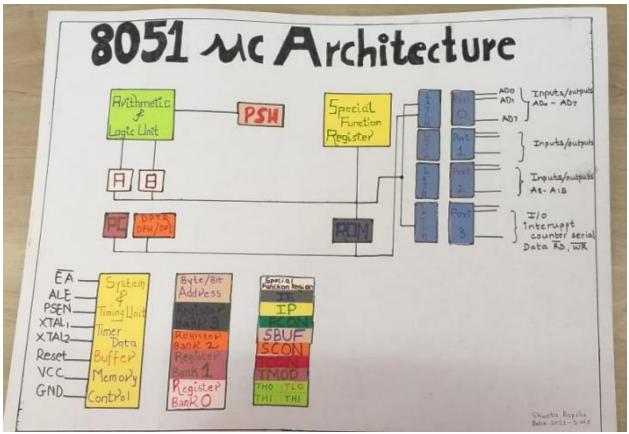
- Answer a question
- Present idea on poster
- Demo how to use an application



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**Outcome**: poster can be shared on drive links or on website so that other students can see it at any time and learn the concept. In this subject students made poster presentation and demonstration of architecture of 8051.. This is best option for peer-to-peer learning.



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# **Department of Electronics and Telecommunication**

Class: SE (EXTC) Academic year (2022-23) SEM: IV

Name of Faculty: Paurnima Vadak

**Subject**: Principles of Communication Engineering

Class: S.E.EXTC SEM:IV

Methodology followed: Group discussion and teaching one another

**Difficulty faced:** Students learn the things but they may forget however it's said that if you teach you can learn it better. Also many students are poor at group discussion or working in a team.

New method identified: TEACH & LEARN ACTIVITY

#### **Activity report**:

In this activity emphasis is put on understanding a topic to such a level that you are able to teach it to others this way learning is improved. At the same time you have to learn a topic from others also. As it's a group activity performance of all the members are equally important for a good score.

- 1) All the students are divided in two groups: Group 1 & Group 2
- 2) Resources to learn 2 different topics will be provided to 2 different groups. e.g. Topic A to Group 1 and Topic B to Group 2.
- 3) Team of 4 members will be formed. 2 from group 1 and 2 from group 2.
- 4) Members of group 1 will understand and then teach their topic to group 2 students and vice versa.
- 5) A combined test will be conducted on both the topics.
- 6) Evaluation will be done on individual basis but score for all the members will be same which will be an average of score of all the members of the group. (This is to ensure team work where an individual who has understood the topic should take efforts to explain the topic to their team members also.)

**Outcome**: This activity improved the student's learning process as they were actively involved in learning and teaching rather than getting everything ready. As it was a group activity it made the group members to work together.



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# **Department of Electronics and Telecommunication**

Class: TE (EXTC) Academic year (222-23) SEM: V

Subject: Data Structure and Algorithm

Subject Incharge: Dr. Aarti Bakshi

Methodology followed: Google classroom, PPTS.

**Difficulty faced:** Students should know applications of data structure and algorithm

**New method identified**: Power Point Presentation on applications of applications of data structure and algorithm.

**Activity:** Power Point Presentation

**Activity Report:** This PowerPoint presentation allows students to present advanced topics- content beyond the syllabus by applying the concept of data structure and algorithm. It helps a student to learn applications of subjects.

**Outcome:** This provided student with the knowledge of the current advanced domain for the subject learned and gave the vision to think in that domain.







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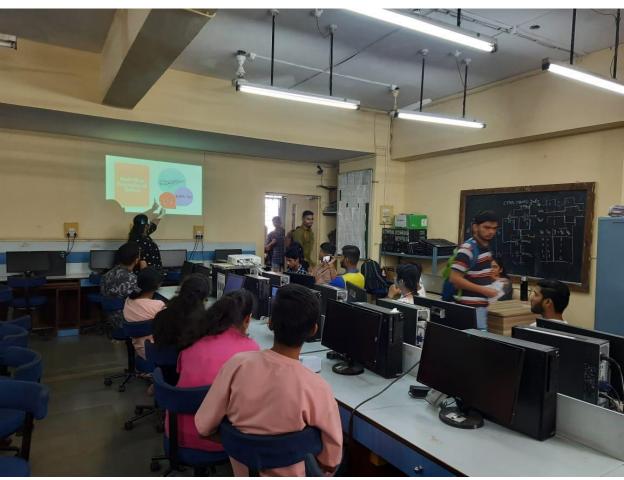




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# **Department of Electronics and Telecommunication**

Class: TE (EXTC) Academic year (2022-23) SEM: V

Subject: Digital Communication

Subject In charge: Mrs.Sushma Kore

**Methodology followed**: classroom teaching, Google classroom, PPTS.

**Difficulty faced:** To remember the theoretical concepts.

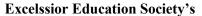
**New method identified**: 1. Power Point Presentation on use of digital communication in latest technologies.

**2.** Expert talk in communication domain

**Activity Report:** This PowerPoint presentation allows students to present advanced topics- content beyond the syllabus by applying the communication concept. It helps a student to learn applications of subjects.

**Outcome:** This provided student with the knowledge of the current advanced domain for the subject learned and gave the vision to think in that domain.







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### **Department of Electronics and Telecommunication**



# AI (Artificial Intelligence), ML (Machine Learning)



- The goal: In order to master this
   powerlessness in the digital age and also to
   communicate successfully(more successfully),
   we must become more digitally fit. This digital
   fitness will become so important in the future
   because we are increasingly outsourcing
   communication to applications that work with
   artificial intelligence.
- Status: AI has already consistently made its way into communication and in many different ways. Privately, we know you from the voice assistants on smartphones (e.g. SIRI) or in the home (e.g. Alexa).



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Class: TE (EXTC) Academic year (2022-23) SEM: V

**Subject:** Discrete Time Signal Processing

Subject Incharge: Dr. Aarti Bakshi

**Methodology followed**: Google classroom, PPTs.

**Difficulty faced:** Students will able to watch video at preferable time and able solve the problems.

New method identified: Screen Casting.

**Activity:** Screen Casting

**Activity Report:** Screen Casting is to create instructional videos. These videos enable students to learn at their own pace, wherever they prefer. Screencasts can provide learners a student-centered and engaging learning experience in both distance and traditional learning settings.

Academically bright student solved discrete time signal processing different module numerical problems and recorded video to summarize it in their own words. These videos are uploaded using YouTube and links are provided on respective subject Google classroom. This helps the other students to learn and practice the numerical problems whenever they prefer.

**Outcome:** Students learned to create video and uploading of it on YouTube. These videos help the students to learn the concept.



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# **Department of Electronics and Telecommunication**

Class: TE (EXTC) Academic year (2022-23) SEM: VI

Name of Faculty: Ms. Sushma Kore

**Sub: Computer Communication Network** 

Methodology followed: Google classroom, ppt.

**Difficulty faced:** Student faced difficulty sometime internet issues, presentation of models.

**New method identified:** Review on research paper on "Design of wearable antenna in Wireless

Body Area Network"

**Activity report**: Activity given to student is to Review on research paper on "Design of wearable" antenna in Wireless Body Area Network"

Reports use features such as tables, graphics, pictures, voice, or specialized vocabulary in order to persuade a specific audience to undertake an action or inform the reader of the subject at hand. Some common elements of written reports include headings to indicate topics and help the reader locate relevant information quickly, and visual elements such as charts, tables and figures, which are useful for breaking up large sections of text and making complex issues more accessible.

Research paper review can provide learners a student-centered and engaging learning experience in both distance and traditional learning settings.

Outcome: Report gives consolidated & updated information. ...

- 1. Review paper as a means of internal communication. ...
- 2. Review paper facilitates decision making and planning. ...
- 3. Review paper discloses unknown information. ...
- 4. Review paper gives reliable information.

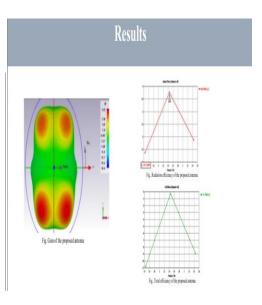


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### **Department of Electronics and Telecommunication**

Class: BE (EXTC) Academic year (2022-23) SEM: VII

Subject: Internet Communication Engineering

Methodology followed: Traditional teaching, Google classroom, ppt.

**Difficulty faced:** A.Y 2022-23 B.E syllabus in changed, so few topics/concepts are newly added in

this subject.

Subject In charge: Mrs. Sushma Kore

**Activity Report:** In the regular ICE subject lecture, students were asked to report to library for the lecture. After that few reference books were issued and asked them to go through that, read some topic. GroupWise topics were different. At the end open book test was conducted which is considered as a study material.

**Outcome:** To understand any new concept properly reference books plays a very important role. To make the students to refer textbooks or reference books for study.





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# **Department of Electronics and Telecommunication**

Class: BE (EXTC) Academic year (2022-23) SEM: VII

Name of Faculty: Mrs. Anupama Chaurasia

**Sub: Microwave Engineering** 

Class: B.E.EXTC SEM: VII-R19

**Methodology followed**: Teaching, Written Assignments, Remedial lectures

**Difficulty faced:** Students do not get the exact understanding of the topic through regular offline classroom teachings and basic written subject assignments.

New method identified: Poster Making Assignment

**Activity report**: The best advantage of poster making is that it facilitates team work and understanding along with facilitating creative thinking and extensive research and reading. It provides students with an opportunity to learn by doing, in turn strengthening the learning.

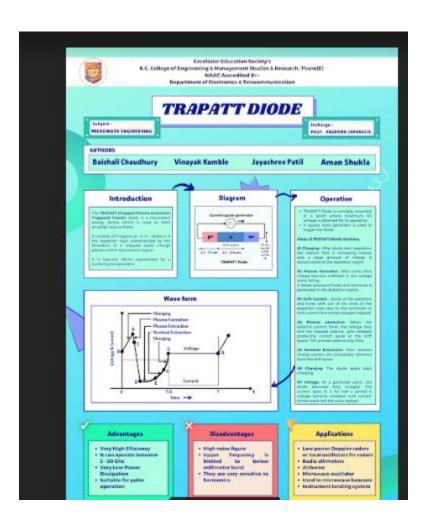
**Outcome**: Students were given poster making assignment on the topics which are more theoretical and difficult to recall during oral exam or written theory exams. Student made very innovative posters depicting the allotted topics. It gave the better understanding of the topics and strengthening their memory. Students were asked to share each other's poster to prepare for forth coming exams.





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# **Department of Electronics and Telecommunication**

Class: BE (EXTC) Academic year (2022-23) SEM: VII

Subject: Cloud Computing and Security

Subject In-charge: Dr. Rajiv Iyer

**Activity:** Research paper review

**Activity Report:** Identified advanced learners were asked to review a research paper on cloud computing. This helped them to get ahead of other learners to explore the latest research material which is not part of their curriculum.

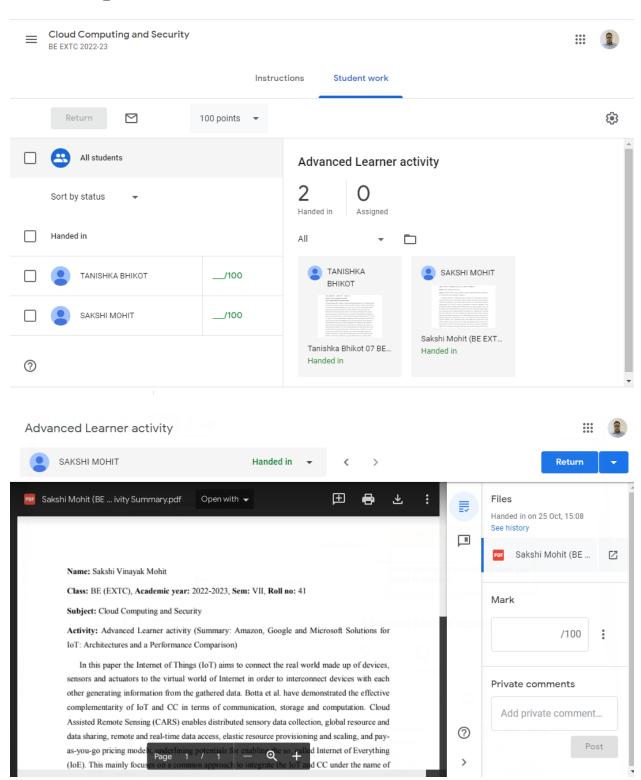
The research paper titled, 'Amazon, Google and Microsoft Solutions for IoT: Architectures and a Performance Comparison' written by authors Paola Pierloni, Roberto Concetti, Alberto Belli and Lorenzo Palma compares the different types of IoT devices. IoT devices provided by different cloud platforms like Amazon Web Services (AWS), Microsoft Azure and Google Cloud Platform are described. Each platform provides a Cloud access point through which physical devices can connect in a secure and private way.

**Outcome:** Summarizing will ensure that students have had a productive and successful study session. Summarizing is like panning for gold—it helps you look for and find the main points and key details in every paragraph. Effective learning is all about identifying and understanding main points and key details.



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### **Department of Electronics and Telecommunication**

Class: BE (EXTC) Academic year (2022-23) SEM: VIII(R-19)

Name of Faculty: Mrs. Anupama Chaurasia

Sub: Augmented and Virtual Reality

**Methodology followed**: Teaching, Written Assignments, Remedial lectures

**Difficulty faced:** Students do not get the exact understanding of the topic through regular offline classroom teachings and basic written subject assignments.

New method identified: Certification Course on Augmented Reality, Think-Pair-Share Activity

#### 1. Activity report: Certification Course on Augmented Reality

It provides students with an opportunity to strengthen the learning. Some of the key benefits of certification include:

- Validation of knowledge
- Increased marketability
- Increased earning power
- Enhanced academic performance
- Increased confidence





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**Outcome**: Students were asked to complete a course on *Introduction to Augmented Reality and AR Core* from *Coursera*. Course included quizzes and assignments which gave them better understanding of the topics and aided in strengthening their knowledge. It helped them to perform well in written exams too.

#### 2. Activity report: Think-Pair-Share Activity

Think-Pair-Share (TPS) is a cooperative learning activity that can work in varied size classrooms and in any subject. Instructors pose a question, students first THINK to themselves prior to being instructed to discuss their response with a person sitting near them (PAIR). Students think individually, and then share ideas with partner to develop one wordle between the two of them. Then SHARE with group.



#### **Outcome:**

The Think-Pair-Share activity gives them the opportunity to feel more comfortable sharing their thoughts. In addition to fostering social skills, this strategy also improves students' speaking and listening skills. When pairs brainstorm together, each student learns from their partner.