SAMR MODEL AND ITS PROJECTIONS IN CADET COLLEGES TO EXPLORE ONLINE LEARNING

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Abstract

With the advent of technological revolution in all the spheres of life, digital educative platforms have become widely popular among both the teachers and learners to pursue regular and distance learning at large. As also the present learners are mostly digital natives and their interest level has shifted its place towards a more digitalized world rather than a traditional classroom enabling educators to coin new teaching techniques. As a result, the necessity and emergence of new methodologies were both predicted and expected by many of which SAMR Model by Dr. Ruben Puentedura is one of the best outcrops. This model is like a spectrum having four stages: Substitution, Augmentation, Modification and Redefinition. Here, Substitution and Augmentation can be interpreted conceptually while Modification and Redefinition have even more room for interpretation. Recently, in Bangladesh Cadet Colleges, online education has been introduced as the Cadets are pursuing their study from home making the adoption of an online teaching methodology quite imminent. This research, therefore, aims to project the prospects of adopting SAMR Model in Cadet College Online Education Program identifying the perceptions of Faculty Members across 12 Cadet Colleges while considering the perceptions of Cadets from only 1 Cadet College. Last but not the least, this study also will come in handy to determine whether the teachers should use online teaching platforms only as a tool for pursuing education or as a catalyst for better educational changes.

Keywords: samr model, online teaching-learning, cadets, cadet colleges, faculty members.

1. Introduction

The unexpected Covid-19 pandemic has made the 2019-20 a year of uncertainty for both the teachers and the students. The institutions are closed for an uncertain period of time affecting students' regular academic study. To meet the needs of the students, institutions therefore inaugurated online teaching programs which gave the feel 'thrown into the deep end' to many veteran and new teachers. With no prior notice or training teachers are imparting online teaching forgetting about the effectiveness or the quality of learning. This is certainly producing boredom among the 21st century students as they are more technology savvy. According to Tapscott (2009, p. 144-147), this 'Net Generation' expects and even demands innovation in all areas of their life and education will be no exception. Also to integrate technology with curriculum for designing or preparing a lesson and to implement it properly with maximum learning outcomes achieved into the online classrooms, teachers need a tool to do so.

Moreover, according to Burns (2020, para. 13), "In addition to using online technologies (for example, learning management systems or web conferencing applications), and selecting appropriate web-based technologies to enhance student learning, teachers need more support in learning how to manage learners remotely and in live sessions. They also need training in online assessment techniques and ways to communicate and facilitate online learning, particularly with students who are most vulnerable." The SAMR

Model here can serve the purpose by helping the teachers to ensure qualitative online classes through providing them with a basic framework of designing online classes and activities.

In Bangladesh Cadet Colleges, the faculty members are also using online web conferencing application like 'Zoom' and learning management system like 'Edmodo' with less expertise and training. It really makes teaching difficult in a completely new platform without proper tools. Many veteran faculty members are also having 'reality shock' like the beginners. According to Veenman (1984, p.143) , 'reality shock' is 'the collapse of the missionary ideals formed during teacher training by the harsh and rude reality of classroom life.' These above factors definitely affecting the desired qualitative output of online classes. To mitigate the limitations and to better the online teaching-learning process adoption of the SAMR Model seems inevitable.

2. Literature Review

Too often mass people are seen confusing 'the use of technology in the classroom' and 'taking a class through technology'; to their demand if a teacher can use PowerPoint, Videos or Audios in the classroom then what is so hazardous in taking online classes? Burns (2020, para. 12 & 14) claims, "One positive benefit of emergency online teaching has been that many teachers learned how to use technology in authentic ways by experimenting in a relatively low-risk environment. Despite learning new skills, and their comfort using technology as part of face-to-face teaching, the five K-12 teachers I talked to still need far more preparation to teach online. As one observed, "Teaching face-to-face with technology is one thing; teaching through technology is a whole different ball game." ....To teach well online, teachers will need to develop a repertoire of online pedagogies that involve a mix of:
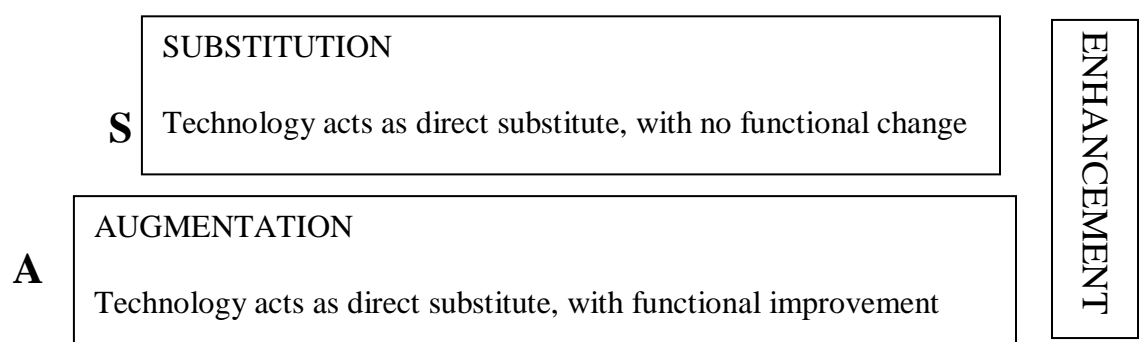
Direct instruction: Transmitting information about concepts, skills, and procedures via demonstrations, lectures, screencasts, videos, or online presentations.
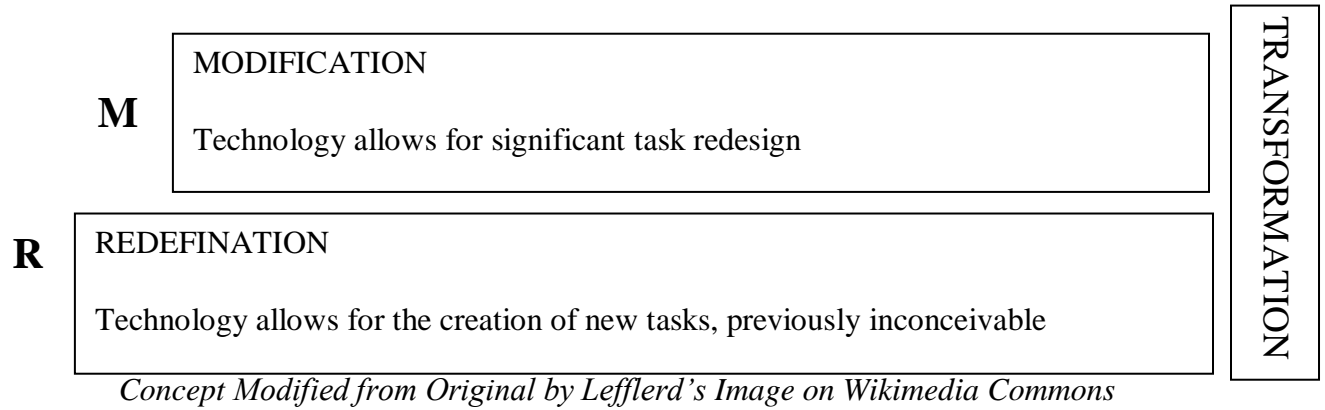
Cognitive models of learning: Structured activities that don't just put information in students' heads but get knowledge out—inductive reasoning, open-ended questioning, experiments, metacognitive strategies, and problem-solving.

Social models of learning: Collaborative instructional methods we can still use in online learning—jigsaw approaches, reciprocal teaching, discussions, debates, and peer tutoring.

Above all, teachers will need guidance and strategies for establishing a sense of emotional, cognitive, and instructional presence so students feel connected and part of an online community of learners."

Hereby, to meet the catalogue of pedagogical mix claimed above by Burns (2020) SAMR model serves to the fullest. As H.L (2017, para 4-8) explains SAMR Model elaborately: "

	SUBSTITUTION	
S	Technology acts as direct substitute, with no functional change	ENHANCEMENT
A	AUGMENTATION Technology acts as direct substitute, with functional improvement	

M

MODIFICATION
Technology allows for significant task redesign

R

REDEFINATION
Technology allows for the creation of new tasks, previously inconceivable

TRANSFORMATION

Concept Modified from Original by Lefflerd's Image on Wikimedia Commons

Substitution

At this stage, technology is directly substituted for a more traditional one. It is a simple, bare-bones, direct replacement. For example, if you are teaching a government lesson on the Constitution, you might use an electronic or web-based version of the document instead of a hard copy. Students might also answer questions about the Constitution using a Microsoft Word instead of filling out a worksheet.

Substitution might also include a student using Keynote, PowerPoint, Prezi, Slides, or a similar program to present information about an article or amendment to the class.

In this step, you ask yourself what we stand to gain by replacing traditional tools with technology. Invariably, some situations will be better served with pen and paper.

Augmentation

The technology is again directly substituted for a traditional one, but with significant enhancements to the student experience. In other words, you ask yourself if the technology increases or augments a student's productivity and potential in some way.

Returning to the Constitution example, a student might augment a presentation on, say, the 14th Amendment with a video clip of how equal protection under the law was enforced during school desegregation. It could also include interactive links to relevant Supreme Court decisions, such as Plessy v. Ferguson or Brown v. Topeka Board of Education.

Modification

In this stage, you are beginning to move from enhancement to transformation on the model. Instead of replacement or enhancement, this is an actual change to the design of the lesson and its learning outcome. The key question here—does the technology significantly alter the task?

A student presenting research on the 14th Amendment, to continue our example, might create his or her own unique graphic organizer for the class that not only includes the usual multimedia resources but represents a new product or synthesis of existing material. As another example, a group of students might collaborate in a cloud-based workspace to propose a modern definition of equal protection under the law and solicit feedback on their proposals from classmates.

Redefinition

The last stage of the SAMR model is Redefinition and represents the pinnacle of how technology can transform a student's experience. In this case, you ask yourself if the technology tools allow educators to redefine a traditional task in a way that would not be possible without the tech, creating a novel experience.

For example, after completing their group work and soliciting feedback from classmates (both tasks that could be completed "offline" although arguably not with the same experience as in the modified format), students could utilize technology to network with students several states away to see how regional differences impact how others think about the Constitution.

Taking it a step further, students could even interact in real time with citizens in another country to examine key differences in constitutional philosophy and law. This can bridge the gap between K-12 and higher education as it did in this digital citizenship project."

From above it becomes certain that Substitution and Augmentation are relatively candid conceptually while there is even more room for interpretation when it comes to Modification and Redefinition.

H.L (2017, para 9), also mentioned that though many educators find SAMR Model and Bloom's Taxonomy quite relevant as M and R in SAMR Model to some extent lead to Higher Order Thinking Skill defined by Bloom, this is simply not the case as both the models were designed for entirely different purposes.

3. Statement of Research Problem

Access to technology has become one of the basic human rights as many scholars believe that technology will be playing a pivotal role in the next revolution awaiting for the humans. Hence, integration of technology in the classrooms has been introduced long ago in Cadet Colleges but when it comes to online teaching with or through technology, it opens plethora of opportunities to consider and reconsider. It is also worth mentioning that only a few of the Faculties in Cadet Colleges are either experienced or habituated with online learning which expedites the dire necessity of having a helping tool for them that must be easy to understand and fruitful in giving outputs.

As Lacruz (2018, para 1) says, "As technology integration in the classroom is becoming increasingly popular, it becomes increasingly important to have models or frameworks for educators to use to reflect on that integration." So, it becomes quite essential for the Faculties of

Cadet Colleges to have a framework or model basing on which they can design their lessons. Also, they need some tools to reflect on the assimilation of technology and lessons they have done in order to better the teaching-learning process of Cadet Colleges.

On the other hand, the main stakeholders of Cadet Colleges, the Cadets, are invariably digital natives. Hence, to attract them in online classes, it is necessary to implement something innovative in the online lessons so that the Cadets feel keenly interested in their studies.

4. Objectives of the Study

Considering the needs of both Faculties and Cadets, this study therefore will discuss and show how SAMR Model by Dr. Ruben Puentedura can serve the purposes of technological integration with lessons and to measure the success of that integration. Apart from the above, it will also answer the following questions:

1. Why use the SAMR Model?
2. What are the ways of integrating technology with lessons?
3. How this integration takes place?
4. What benefits Faculties and Cadets can have from such integration?
5. Can SAMR Model serve the desired purposes? How?
6. What else can be done to supplement online teaching-learning?

5. Significance of the Study

The SAMR Model for integrating technology into teaching is developed by Dr. Ruben Puentedura with the aim to provide both the Faculties and Educators a technique for moving through degrees of technology adoption to find more meaningful usage of technology in teaching-learning process. The four levels of the model: Substitution, Augmentation, Modification and Redefinition explain the effect of the integration by replacing the age-old traditional pen-paper and textbook method of teaching. It creates a completely new learning style suiting the interest levels of the learners at the same time keeping it too simple for the Faculties to design such a lesson. According to ("Instructional Design/SAMR Model/ What is the SAMR Model, n.d, para 3), "The purpose of the SAMR Model is to assist instructors with determining the level of technology integration in the learning environment. The instructor must first decide to incorporate technology into the planned curriculum, and then determine if the technology is enhancing or transforming the learning. The goal is to introduce technology tools that redefine the learning space, which is ultimately accomplished by replacing traditional teaching methods with alternate learning environments."

However, it is always better to see the feasibility of any model with adequate on ground examples. The following few examples by Walsh (2015) would come in handy to have a clearer understanding of SAMR Model and its benefits:

Lesson: Writing a Short Paper

Taken from: http://www.educatorstechnology.com/2013/08/samr-model-explained-through-examples.html

Original Assignment*:* A hand written paper.

- **Substitution**: A Word Processor replaces a Pen/Pencil in a Writing Assignment.

- **Augmentation**: A Word Processor and text-to-speech function are used to improve the writing process.

- **Modification**: The document created using the Word Processor and text-to-speech function is shared on a blog where feedback can be received and incorporated to help improve the quality of writing.

- **Redefinition**: Instead of a written assignment, students convey analytic thought using multimedia tools.

Lesson: Geography and Travel

A modification of an idea found at https://edofict.wikispaces.com/SAMR+Examples.

Original Assignment*:* An overview of a location consisting of hand written content supplemented with compiled cut-and-pasted magazine clippings.

- **Substitution**: Use presentation software (like Powerpoint or Prezi) to construct a presentation providing information about a selected locale.

- **Augmentation**: Incorporate interactive multimedia – audio, video, hyperlinks – in the presentation to give more depth and provide more engaging presentation.

- **Modification**: Create a digital travel brochure that incorporates multimedia and student created video.

- **Redefinition**: Explore the locale with Google Earth; seek out and include interviews with people who have visited the local.

Lesson: **Understanding Shakespeare**

Taken from: https://edofict.wikispaces.com/SAMR+Examples and modified.

Original Assignment*:* Read a Shakespeare play in traditional printed format.

- **Substitution**: Read Shakespeare texts online.

- **Augmentation**: Use online dictionaries, study guides, history sites, to supplement reading.

- **Modification**: Use multimedia resources like text, audio, and video tools to jointly construct knowledge, learning, and understanding of a portion of a play, or a character, as a group project.

- **Redefinition**: Answer the Question, "What did the culture of the time have on the writing of Shakespeare's plays" my using a Concept Mapping tool and constructing a mind map demonstrating key elements through words and images.

Lesson: **Learning Fractions**

Original Assignment*:* Show understanding of fractions on a worksheet by coloring in blocks.

- **Substitution**: Use an Excel Worksheet to let students "color in" the blocks.

- **Augmentation**: Use Google Sheets to let students "color in" the blocks, where the teacher can offer feedback directly on Google Sheets.

- **Modification:** Use Google Sheets and direct students to online examples and supplementary learning materials for areas that they might struggle with.

- **Redefinition**: Use a Fractions App instead

Lesson: Phys Ed – Learning To Hit a Baseball Well

Original Assignment*:* Learning how to hit a baseball by watching and listening to a Coach or Phys Ed instructor show you and then trying it yourself.

- **Substitution**: The coach/teacher videos the training exercise and uses this as the lesson.

- **Augmentation**: The coach/teacher videos the training exercise and provides links to other training content (videos and articles from other coaches, etc).

- **Modification:** The coach/teacher videos the training exercise and "flips" the lesson, having students watch it as homework, and using class time to practice and reinforce techniques.

- **Redefinition**: Students watch video examples and practice the techniques, then the coach/teacher videos them hitting balls and provides feedback about their technique.

Lesson: An Assessment Exercise

Idea taken from: *https://sites.google.com/a/msad60.org/technology-is-learning/samr-model and slightly modified.* In this example, we take a simple form of assessment and evolve it into a collaborative group project.

Original Assignment: Take a quiz, answers handwritten in a printed form.

- **Substitution**: Distribute the quiz in a Word Processor file format and have student fill in answers on a computer.

- **Augmentation**: Use a Google Form to deliver and complete the quiz. "There is some functional benefit here in that paper is being saved, students and teacher can receive almost immediate feedback on student level of understanding of material. This level starts to move along the teacher / student centric continuum. The impact of immediate feedback is that students may begin to become more engaged in learning."

- **Modification**: As an alternative form of assessment, students could be asked to write an essay around a relevant theme. The written essay could then be narrated and captured as vocal recording.

- **Redefinition**: "A classroom is asked to create a documentary video answering an essential question related to important concepts. Teams of students take on different subtopics and collaborate to create one final product. Teams are expected to contact outside sources for information."

Lesson: Art/Painting

Original Assignment*:* Drawing a picture using traditional brush, paint, paper. Of course, there is a big difference between doing this "by hand" in the traditional manner and doing it digitally – digitally is by no means "better", it is just different and opens up some interesting possibilities.

- **Substitution**: Use a digital drawing/painting program (like MS Paint) to draw/paint a picture.

- **Augmentation**: Use a tool that allows the creation of your masterpiece to be "played back" (like Educreations, for example).

- **Modification:** Pull a background image to use as a "canvas" – you could even scan something hand drawn and use that.

- **Redefinition**: Create Artwork Collaboratively using a Collaborative Online Whiteboard (like Twiddla).

Lesson: Email Etiquette

Original lesson*:* Review printed copies of Email Etiquette concepts and guidelines.

- **Substitution**: Students read an online article discussing Email Etiquette concepts and guidelines.

- **Augmentation**: Student read an online article discussing Email Etiquette concepts and guidelines that includes links to examples, and offer comments online indicating their top 5 favorite tips.

- **Modification**: Student watch a video discussing Email Etiquette concepts and guidelines and after reviewing the guidelines, they create a Twitter account and Tweet their top 5 tips.

- **Redefinition**: Student watch the guidelines video, then assess examples of Email Etiquette 'violations' and indicate which guidelines should be applied to correct/improve on the examples.

The above lesson examples designed with SAMR Model exemplifies the model picturesquely leading the teachers to rethink their online classes in order to make those more interactive, collaborative and engaging than ever before.

6. Methodology

Participants

The geographical context of the survey is limited within Bangladesh Cadet Colleges in general and Joypurhat Girls' Cadet College in particular. 50 participants were selected, all of them are the Cadets of Joypurhat Girls' Cadet College, and they belong to Grade 8 to Grade 12. From each Grade a number of 10 selected Cadets have participated and all of

them are regular attendees of online classes. It will strengthen the validity of both the questionnaire and the study itself.

Apart from the above, 20 Faculty Members from Joypurhat Girls'Cadet College and another 30 from the rest of the Cadet Colleges were selected for the same purpose to reach a reliable data on the progress of online teaching- learning and to check the needs of a model to be employed.

Instrument

Nothing but two different sets of questionnaires, one for the Cadets (Appendix 1) and the other for the Faculties (Appendix 2), were used as the instrument of the survey. The language of both the questionnaires was English and both the questionnaires had 10 statements. The questionnaire also included structured answers leaving the participants with no choice of alternatives except the provided answers ('Strongly Agree', 'Agree', 'Disagree', and 'Strongly Disagree').

Design and Procedure

All participants contributed in questionnaires, one for the Cadets and the other for the Faculties, which asked them to judge their ability to receive and facilitate online classes. It also asked them about their level of comfort and satisfaction while participating in online classes along with what they feel about employing a teaching-learning framework. However, the language used in the questionnaire was English and the interpretation of data is kept straightforward.

7. Data Analysis

Table- 1

Teachers: What do you think, Online Classes have more to offer than Traditional Classes?

Cadets: What do you think, Online Classes have more to offer than Traditional Classes?

Opinions	Agree		Strongly Agree		Disagree		Strongly Disagree	
Teachers	16	32%	5	10%	24	48%	5	10%
Cadets	26	52%	20	40%	4	8%	-------	-------

From Table-1, it is seen that a total 42% (16+5) of teachers think that online classes can offer more while 58% (24+5) think the opposite. In case of Cadets, 92% (26+20) think that Online classes has the potential to offer more than traditional classes whereas only 8% (4) Cadets think it otherwise.

Table-2

Teachers: Do the present online classes serve the needs of the Cadets successfully?

Cadets: "Present online classes meet the Cadets' needs successfully."

Opinions	Agree		Strongly Agree		Disagree		Strongly Disagree	
Teachers	25	50%	5	10%	15	30%	5	10%
Cadets	6	12%	-------	-------	35	70%	9	18%

In Table-2, we can see that 60% (25+5) Teachers think the present classes are successful and 40% (15+5) of them think otherwise. On the other hand, only 12% (6) Cadets consider the present classes to be okay and 88% (35+9) of them think these classes do not meet their needs.

Table-3

Teachers: Do you think the present online classes lack originality and innovation?

Cadets: "Online classes are more innovative and original."

Opinions	Agree		Strongly Agree		Disagree		Strongly Disagree	
Teachers	10	20%	05	10%	25	50%	10	20%
Cadets	07	14%	-------	-------	26	52%	17	34%

Table-3 shows that 70% (25+10) teachers think present online classes are innovative whereas 30% (10+5) think that those classes lack innovation. From Cadets' perspective, 86% (26+17) Cadets think the present online classes lack originality and innovation and only 14% (07) Cadets think these classes are innovative.

Table-4

Teachers: "Online Classes have become mere PowerPoint Presentations with no specific learning outcomes." What do you think?

Cadets: "Online PowerPoint classes are very fruitful."

Opinions	Agree		Strongly Agree		Disagree		Strongly Disagree	
Teachers	05	10%	-------	-------	38	76%	07	14%
Cadets	15	30%	-------	-------	34	68%	01	2%

In Table-4, 90% (38+7) Teachers think that present online classes are successful in achieving the learning outcomes while only 10% (05) think otherwise. To see what the Cadets think on the same aspect is quite surprising. 70 % (34+1) Cadets think present online classes are not fruitful but the rest of the percentage, 30% (15) think these classes to be fruitful.

Table-5

Teachers: "Most of the Teachers have less experience in online teaching, once they gain some experience, the classes will be automatically perfect." What do you think?

Cadets: "Most of the Teachers have less experience in online teaching, once they gain some experience, the classes will be automatically perfect." What do you think?

Opinions	Agree		Strongly Agree		Disagree		Strongly Disagree	
Teachers	41	82%	07	14%	01	2%	01	2%
Cadets	39	78%	11	22%	-------	-------	-------	-------

From Table-5, we can see that 96% Teachers (41+07) think with time the online classes will get better automatically and only 4% (1+1) teachers think otherwise. However, 100% (39+11) Cadets think alike the majority of the teachers that the online classes will get better automatically with time.

Table-6

Teachers: "Learners' attitude matters the most in case of a successful online class." What do you think?

Cadets: "Learners' attitude matters the most in case of a successful online class." What do you think?

Opinions	Agree		Strongly Agree		Disagree		Strongly Disagree	
Teachers	44	88%	01	2%	05	10%	-------	-------
Cadets	43	86%	06	12%	-------	-------	01	02%

According to Table-6, 90% (44+01) Teachers and 98% (43+06) Cadets think, learners' attitude matters the most in making an online class successful whereas only 10% (05) Teachers and 2% (1) Cadets think otherwise.

Table-7

Teachers: Do you think, Online Classes make learning haphazard?

Cadets: Do you think, Online Classes make learning haphazard?

Opinions	Agree		Strongly Agree		Disagree		Strongly Disagree	
Teachers	04	8%	-------	-------	46	92%	-------	-------
Cadets	13	26%	03	6%	26	52%	8	16%

Table-7, gives the information that 92% (46) Teachers and 68% (26+8) Cadets think online classes do not make learning haphazard but 8% (04) Teachers and 32% (13+ 03) Cadets found learning to be haphazard in online classes.

Table-8

Teachers: Do you think, following a traditional methodology/ model can improve the standard of online classes?

Cadets: "Teachers need to employ new techniques to teach online."

Opinions	Agree		Strongly Agree		Disagree		Strongly Disagree	
Teachers	16	32%	02	4%	22	44%	10	20%
Cadets	49	98%	01	2%	-------	-------	-------	-------

According to Table-8, 36% (16+02) Teachers think traditional teaching methods can improve online teaching whereas 64% (22+10) Teachers think it otherwise. As far as Cadets' view is concerned, 100% (49+1) of the Cadets think teachers need new techniques for online classes.

Table-9

Teachers: Do you think it's necessary to employ an online methodology/ model to better the present teaching-learning?

Cadets: Do you think it's necessary to employ an online teaching strategy to better the present teaching-learning?

Opinions	Agree		Strongly Agree		Disagree		Strongly Disagree	
Teachers	44	88%	04	8%	02	4%	-------	-------
Cadets	48	96%	02	4%	-------	-------	-------	-------

In Table-9, it is seen that 96% (44+04) Teachers and 100% (48+02) Cadets think it necessary to employ an online teaching technique whereas only 4% (02) Teachers think it otherwise.

Table-10

Teachers: "Following a framework to achieve desired learning outcomes needs positive attitude from both teacher and student."

Cadets: For having a successful online class both the teachers and Cadets have to be more positive while attending the classes.

Opinions	Agree		Strongly Agree		Disagree		Strongly Disagree	
Teachers	49	98%	01	2%	-------	-------	-------	-------
Cadets	50	100%	-------	-------	-------	-------	-------	-------

Table-10, shows that 100% (49+01) Teachers and 100% (50) Cadets think it necessary to have a positive attitude from both ends to attain the desired learning outcomes in an online class.

8. Discussion

The Analysis of above data puts some significant light on the condition of present online-teaching learning in Cadet Colleges. Based on the statistic of received responses, a few recommendations to enhance the overall online teaching learning process are given as follows:

- There is a gap between Cadets' and Teachers' expectations as far as online classes are concerned. To minimize such a gap, teachers' can modify their online teaching process consulting the Cadets' needs or expectations and with the help of updated and modern online teaching tools.
- Online classes need to be more innovative in order to be more effective. Teachers need to dig out ways of employing creativity in online classes. A framework or model can sort them out here easily to adopt own creativity in an organized manner.
- PowerPoint is a good way to teach online but it must not be monotonous or very rigid. Customizing the slides with necessary learning outputs and scopes of increased participation must be ensured. Including information available in textbooks, which Cadets can avail easily, also should be minimized.
- Finally, positive learning attitude is a must from both teachers' and Cadets' end. Providing limited extrinsic motivation in order to expedite intrinsic motivation among the Cadets can be ensured in this regard.

By considering all the above points the inevitability and imminence of adopting an online teaching model in Cadet College Online Teaching –Learning Program seems undeniable. SAMR Model by Dr. Ruben Puentedura here can serve the purposes in full swing if adopted with proper guidelines and briefings.

9. Demographic Limitations

This study is scrupulously done to check the feasibility and needs of adopting SAMR Model in Cadet College Teaching-Learning Process. The limitations of this study are as follows:

- This study does not consider any other online teaching models. This is one of the major limitations this study has.
- The number of Teachers and Cadets, who responded in the survey, could have been increased to add more reliability to the conducted survey.
- The questionnaire was structured leaving the participants less scope to reflect properly.
- The survey also encompasses Cadets of only one Cadet College leaving apart 11 other of the kind.
- This study is done on pure hypothesis, no practical demonstration of the proposed Model is conducted whatsoever by the author.

10. Conclusion

Bangladesh Cadet Colleges are the pioneers of Higher Secondary Education in the country since inception. During this undesired pandemic, the educational program of Cadet Colleges must run keeping aside all the odds to benefit the Cadets in their academic pursuit. To do so, online education is the only option left and to perfect the online education process to suit the existing demands of the Cadets, employment of a framework of designing the classes is a dire need. SAMR Model here is the best one Bangladesh Cadet Colleges can rely on as the model is updated and easy in nature as far as its usages and outputs are concerned. It also ensures a level of online communication and collaboration between teachers and students which was never before possible.

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Appendix-1

(Questionnaire for the Cadets)

Dear Cadets,

Welcome! Your 'view' matters. I gracefully await your pragmatic answers. It will be handy in understanding the need of a new online teaching methodology in our ongoing teaching-learning program. Thanks in advance.

St. No.	Statement	Agree	Strongly Agree	Disagree	Strongly Disagree
1	What do you think, Online Classes have more to offer than Traditional Classes?				
2	"Present online classes meet the Cadets' needs successfully."				
3	"Online classes are more innovative and original."				
4	"Online PowerPoint classes are very fruitful."				
5	"Most of the Teachers have less experience in online teaching, once they gain some experience, the classes will be automatically perfect." What do you think?				
6	"Learners' attitude matters the most in case of a successful online class." What do you think?				
7	Do you think, Online Classes make learning haphazard?				
8	"Teachers need to employ new techniques to teach online."				
9	Do you think it's necessary to employ an online teaching strategy to better the present teaching-learning?				
10	For having a successful online class both the teachers and Cadets have to be more positive while attending the classes.				

Appendix-2

(Questionnaire for the Faculty Members)

      Respected Colleagues,

Welcome! Your 'view' matters. I gracefully await your pragmatic answers. It will be handy in understanding the need of a new online teaching methodology in our ongoing teaching-learning program. Thanks in advance.

St. No.	Statement	Agree	Strongly Agree	Disagree	Strongly Disagree
1	What do you think, Online Classes have more to offer than Traditional Classes?				
2	Do the present online classes serve the needs of the Cadets successfully?				
3	Do you think the present online classes lack originality and innovation?				
4	"Online Classes have become mere PowerPoint Presentations with no specific learning outcomes." What do you think?				
5	"Most of the Teachers have less experience in online teaching, once they gain some experience, the classes will be automatically perfect." What do you think?				
6	"Learners' attitude matters the most in case of a successful online class." What do you think?				
7	Do you think, Online Classes make learning haphazard?				
8	Do you think, following a traditional methodology/ model can improve the standard of online classes?				
9	Do you think it's necessary to employ an online methodology/ model to better the present teaching-learning?				
10	"Following a framework to achieve desired learning outcomes needs positive attitude from both teacher and student."				