

Developing Strategic Plans for Remote Students

Strategies for Remote Students During a National Emergency using the ARCS Model

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Author Note

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This paper was developed in response to the effects of the pandemic of 2020 (SARS-CoV-2 (Covid-19)) on educational institutions and student attention.

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ABSTRACT

The SARS-CoV-2 (Covid-19) Pandemic created a 'new norm' learning environment for many schools and instructors. A main issue resulting from the pandemic on education was immediate remote learning plans had to be developed in a noticeably short period of time. In some cases, schools did not have plans in place that permitted remote learning, which caused issues for the schools, instructors, and students. One of the main issues from the lack of plans or planning was how to capture and maintain the attention of the student. This paper was developed around the ARCS model by Keller (1983), which is normally associated with instructional design to help the school or instructor understand the process to capture and maintain student attention during a national emergency so the student can achieve success in learning.

Keywords: sars-cov-2, covid-19, attention, arcs, school, instructor, remote learning, pandemic

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National Emergencies are declared by the President of the United States using the Emergency Powers Act. The Emergency Powers Act was declared by congress in 1976 (Congress.Gov, 2020). Prior to the passing of the act, there were eight other previous instances by presidents to declare emergency powers. The Emergency Powers Act gives the President of the United States additional powers during a declared national emergency, to include assembling resources, both public and private, to assist in the relief or mitigation of the national emergency. Governors of states requested the president to invoke the act during the SARS-CoV-2 (Covid-19) Pandemic and to assist them with the emergency in their states (Sergei Klebnikov, 2020).

Donald Trump, The President of the United States declared a national emergency regarding the Novel Coronavirus Covid-19 disease on March 1, 2020 (Donald J. Trump, 2020) under the advice and recommendation of the Secretary of Health and Human Services, Director of the Center for Disease Control, and other US Government Agencies. Governors of states of the union declared emergencies in their respective states, and requested additional resources form the US Government. The governors of the states of the union on their emergency declarations closed all schools (Education Week, 2020), which created a situation that most school districts, parents, and students were ill equipped to handle and remote learning became a new way of life for instructors and students.

Remote learning became two of the most used words for companies, governments, instructors, and students during the time of the SARS-CoV-2 (Coronavirus (Covid 19)) pandemic. The World Health Organization declared a pandemic (Ducharme, 2020) and a national emergency was declared in the United States in 2020. Fortunately, there were numerous online tools for the remote learner, which until now were not prevalent in people's mind until the

emergency occurred, and remote learning became the new way of life. Remote learner online tools are used to schedule time, track progress, and act as learning management systems while the student and teacher are performing online tasks. These tools would become widespread and used often throughout the national emergency. Scheduling education is important to maintain normalcy for the student and to promote the need to create an environment in which the student will feel comfortable.

Schools and other instructional entities that did not have E-learning or remote learning as a part of their curriculum were ill equipped to handle the immediate closure of schools in terms of student learning. Some schools left the education up to the student, while others were using the same curriculum as the normal school environment. Schools that used the same curriculum that is not remote learner ready causes issues with learning (J. D. Tuccile, 2020). The immediate closure of schools forced instructors to create on-the-fly curriculum or had no curriculum because of the uncertainty of the environment.

The uncertainty of the environment and ill -prepared instructors and schools put students at a disadvantage for learning. Instructors and school systems that were not prepared to maintain the attention of the student in a remote environment should focus on the ARCS model in terms of instructional design as a framework for capturing and holding on to the attention of the student, with the emphasis on motivation. The online learning method for schools not prepared for remote learning were using existing learning models, which do not have an online component or proper support (Forsyth, Pizzica, Laxton, & Mahony, 2012).

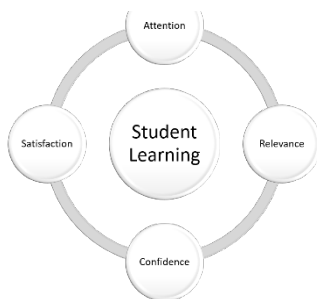
A main issue for online learning is how to maintain the student focus on learning. The focus on learning is much more prevalent for students due to the rigors of online learning because the student must immediately learn new methods and train themselves to continue

lessons in a completely new environment. One method the teacher or care giver can assist with the student's immediate environmental learning environment is to find new and inventive methods to motivate the student to complete course material or online class projects. The material must maintain the focus of the student during course work, lectures, and the online presence with the instructor. Motivation of the student becomes vital to ensure the student can progress and complete school material successfully.

The ARCS model (figure 1), was developed by John Keller in 1983, ARCS is an acronym for identifying the four pillars for achieving motivation in students, Attention (A), Relevance (R), Confidence (C), and Satisfaction (S), and is centered on how a student's motivation can be influenced (McConnell, Hoover, & Sasse, 2001). This paper will describe how the principals of the ARCS model can be adapted to remote learning to keep a student actively involved in remote learning during a national emergency.

ARCS Model

Figure 1 - ARCS Model

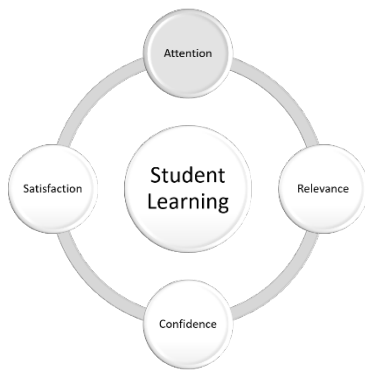


The ARCS model was initially developed to assist instructors by including motivational factors into the design of the instructional material for the purpose of motivating the student. The ARCS model used as a method to influence and motivate students during the national emergency that forced students into their homes for education. It is easy enough to tell a student to be motivated or that they 'need' to be motivated, but that is not motivation itself. The learner needs to learn by actively creating their own learning environment, as in constructivist learning (Carbonell, 2013). The ARCS model is used to identify certain concepts that can be used as a framework to assist with the motivational concept by providing areas of common

interest, humor, curiosity, and more importantly how to maintain the attention of the learner for the duration instead of one sitting. Many schools and instructors were not prepared for 100% online learning. Some schools were using a hybrid system prior to the pandemic, but the onsite classroom always existed. Now schools and educators are trying to randomly identify the online learning concept to their students as they themselves are attempting to cope with their new reality of remote education.

Attention Pillar

Figure 2 - ARCS Model - Attention



The ARCS model breaks down into four (4) pillars of motivation, the first one is Attention, which encompasses tools and a framework for the development of instructional material for online or web-based learning. The attention (A) pillar can also be a part of the in-home motivational framework for educators and students. In the new learning environment, the student must contend with home life, siblings, parents, assignments, lectures (or videos), and other external forces. The Attention pillar of the ARCS model discusses how the attention of the student can be influenced into a learning environment. The main idea behind this tenet is to grab and hold the attention of the student. Several methods were posited for developing instructional material, but this goes beyond the material itself to student motivation. Student motivation is the driving force for student accomplishment.

Motivation cannot be identified by observation, there must be an underlying reason for the student to react and accomplish a task (Cherry, 2020). The Attention tenet in the ARCS model identifies the need for cues before the student will act. When cues are used to capture the

attention of the student, the next step is to maintain the attention throughout the duration of the task. For instance, the student must have an internal reason for placing full attention on the subject or task before the student will react, as in the fear of receiving a failing grade, or the fear of not getting a high grade, such as an A or Pass or Fail.

It is important to understand motivating factors in learning. The motivating factors, such as the A or Pass/fail above are opposites of one another, yet both reasons are motivators for completing the task. One motivator is fear of failure and the other is a fear of self-underachieving or under confidence. There are two types of motivational factors according to Cherry (2020), extrinsic and intrinsic. An extrinsic motivator is one in which an outside influence (fear of a failing grade or not gaining social acceptance) controls the motivation of the student to accept and maintain attention. An intrinsic motivator, for example is from within the student, such as the feeling of accomplishment after completing a goal.

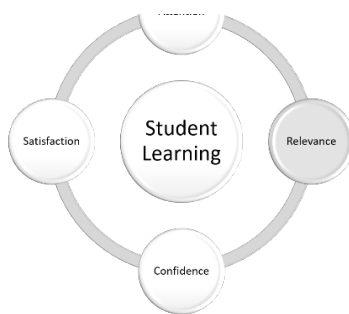
The attention of the student is paramount before the other tenets of the ARCS model can be recognized. When the instruction is something the student wants to accomplish, or a goal the student wants to achieve, the student will perform better toward the completion of the goal. Instructors, and in some cases, parents must ensure the student is able to focus on their studies in a national emergency, such as a pandemic by following a structured day, and by interjecting humor, self-focus, and a reason for competing the coursework in a home based environment.

A structured day is one in which the student has a set time of the day for study, but also contains scheduled time for collaborating or contacting friends. Remote learning does not need to be a solo venture, there are many collaboration tools that can be used both synchronously and asynchronously to maintain social interactivity without disregard to social distancing (Center for Teaching Innovation, 2020). One of the motivators for this action is to know there is a target that

must be met at a specific time. Over time the structure of the day will become second nature. The effects of the motivators for the student will be to grab the attention of the student (time based), goal-oriented, and scheduled daily. When the structure is broken the student may no longer maintain focus on the goal.

Relevance Pillar

Figure 3 - ARCS Model - Relevance



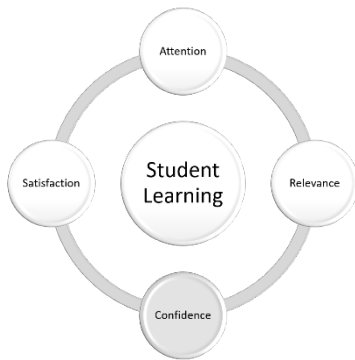
The second part of the ARCS model by Keller (1983) is Relevance (R). Relevance is the connection between the student and the material or goal. The student with a connection to the material will want to learn the subject. For instance a chemistry major will want to learn the names of the individual components and how they work together, a student of nursing will want to learn about airways, bleeding, and other basic framework ideas needed to keep a person healthy (McConnell, Hoover, & Sasse, 2001).

The instructor should design work for remote students with answers to questions the student may ask themselves, such as how can I use this material or do I need to learn this material to complete a course so I can go on to the next grade? One of the main questions the instructor should ask is does this subject cause issues with motivation? If the answer is yes, the instruction should be modified to include content or motivation factors or cues for attention and relevance for the student. This is the relevance tenet of the ARCS model.

The student must have a high level of importance for the material, whether it is through intrinsic, or the more common in today's environment, extrinsic motivators, to successfully succeed at the highest level of comprehension. Intrinsic motivation will help the relevance factor

for the student because the student will want to learn the subject because it has value to the student (Gorochategui, 2016). Extrinsic motivation which means the student will go through the motions of learning, which may also reduce comprehension levels. The student may want to get it over with as little effort as possible (Keller, 2017).

Figure 4 - ARCS Model - Confidence



Confidence Pillar

The Confidence tenet is the third pillar part of the ARCS model. The confidence level of the student must be high for the student to stay motivated. When the student feels confident with knowing the material, the student will have a better chance of maintaining motivation to complete the material (National Research Council, 1994). When the confidence level of the student drops, the motivation of the student also drops or may cease to exist any longer. In an extreme example, to make a point, if a third-grade class is given an assignment for something they know they cannot accomplish, the confidence level will drop, and as result of the confidence drop, the attention level of the student may vanish, which means the student may lose all motivation toward the goal.

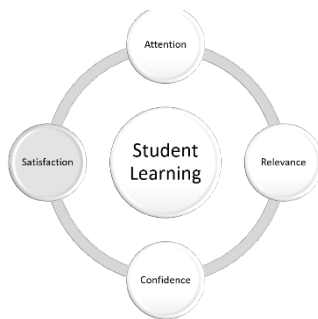
If the instructor asks an elementary student with no knowledge of Algebra to explain the slope of a line or solve for X, that student may quickly lose motivation because the student may have a lack of confidence to create the formulas or be able to explain the equation. This extreme example was used to show how the instructor must ensure the course work is within the confidence level of the students for the student to maintain attention for the class through remote learning methods. As the student gains more self-confidence in their own progress, the attention of the student will also increase. It is important to maintain an equilibrium between quizzes and

other measurements, and student participation, or the opposite effect could occur. The student may lose confidence.

Instructors must always maintain the attention of the student. Regardless of the methods necessary to maintain the attention of the student, such as small quizzes or interactive models to show the student the level of comprehension or recognition through verbal, synchronous, or asynchronous methods, such as email, a chat program, or video. If the instructor fails to allow the student to measure their self-confidence level to the work accomplished, the relevance and attention levels may also fail (National Research Council, 1994), which means the student may fall back to extrinsic values, such as to get the work done with as little effort (and comprehension) as possible.

Satisfaction Pillar

Figure 5 - ARCS Model - Satisfaction



The last tenet of the ARCS model is Satisfaction (S). Satisfaction of the student is realized when the student can see a positive outcome from their level of effort on a goal. This is where the small quizzes designed to help the student identify their progress or acknowledgement from

the instructor plays an important part in the motivation of the student and increase the self-confidence level. When the student is satisfied with the outcome, the attention level may lower because the task is complete, but the relevance and confidence may increase because of the satisfaction level of the student (Keller, 2017). A recognition of student accomplishment is a motivating factor for the student to achieve the next goal.

Conclusion

The instructor or school must be able to create an environment for the student to learn using a combination of all four (4) tenets of the ARCS model in remote learning. It is important to understand how all levels of motivating a student work to be able to create a successful environment for remote learning. The student must be motivated using either extrinsic or intrinsic methods, where intrinsic motivation will allow the student to be motivated from within themselves (Pappas, 2015). Extrinsic motivation uses external influences and may not be as strong as an intrinsic motivator, thus breaking down the tenets until the student uses little effort to complete the task.

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