Instructional Design Proposal:

Managing Mental Health Challenges for Adolescents During the COVID-19 Pandemic

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Problems in Instructional Design for Computers

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Abstract:

According to the World Health Organization, depression is the fourth leading cause of illness globally among 15-19 year olds and fifteenth for the 10-14 year old age group. Anxiety is the ninth leading cause of illness and disability for adolescents between 15-19 years old, and sixth for the 10-14 year olds (WHO, 2021). These are the statistics for mental health conditions among adolescents prior to the COVID-19 pandemic.

However, the pandemic's arrival has brought even more challenging circumstances to an already struggling population. The last year and a half has been marked with constant uncertainty and fewer means for coping with the added stress. Many adolescents have found themselves isolated from their friends in an effort to mitigate the spread of COVID-19 among vulnerable populations. They have also been cut off from family members. Some may have even experienced the desperation and despair of losing loved ones to COVID-19 with little to no way to engage with others to share in their grief. Their social interactions have been very limited.

Meanwhile, school has resumed and added onto the academic challenges students were already experiencing before the pandemic. Many students have been forced into e-learning where they are in front of their computers for 6-8 hours a day trying to learn from teachers who are, themselves, overburdened, stressed out, and have little resources to help them teach more effectively in an online format.

The ages between 10-19 years old are a unique time for development under normal circumstances (WHO, 2021). The CDC states that trauma introduced during this developmental stage has long term mental health risks (2021).

Teaching students about mental health and how to cope with the unusual stress they are under could help empower students to take preventative actions when they feel unbalanced and develop good mental health habits that would last them throughout their lives.

Need for Project:

According to the CDC, "trauma faced at this developmental stage may have long-term consequences across their lifespan." (2021) In addition to the disruption of routines mentioned above, for at least part of the pandemic, no matter what state they resided in, these young people were unable to attend school and engage in their typical social activity. As communities began to enter extended periods of lockdown, many of these adolescents' parents began to lose jobs, which caused many children to lose their sense of security.

This creates a great need for parents to not only recognize signs of depression and anxiety in their children, but also to be familiar with ways to help them mitigate the effects while they seek professional help. In order to address this issue, the CDC has posted some information on its website about the challenges facing adolescents during the COVID-19 pandemic, including a Parental Resource Kit to help parents ensure their children's social, emotional, and mental well-being. While the CDC has posted these resources for parents, they feel that more needs to be done to address adolescents in the school setting directly. This is where our team will come in and develop an instructional and informational solution to inform adolescents about their mental health.

Target Audience:

The target audience will be middle school and high school students (adolescents aged 12-18 years). These learners will have varying reading abilities, as they are in different grades, are different ages, and have different school backgrounds and abilities.   Some learners may be English Language Learners or students with disabilities (visual, hearing, specific learning, etc.) and may face a reading deficit. Some of the learners have prior knowledge of

mental health awareness, based on their background. Most of the learners have a strong aptitude for technology and are already fully immersed in social media and online video games, but level of technology experience for learning will vary.

Our target learner is generally interested in the future and in their own concerns, as well as those of their peers. Peer groups and social acceptance are very important to the target learner, as these learners are highly motivated by social acceptance. The target learner values choice and should be given some power of their learning. Religious backgrounds may have influence over the learner's view of mental health and well-being. There may also be a lack of motivation intrinsically, as well as the possibility of distraction resulting from ADD/ADHD.

User Personas:

- **User Persona 1:**

  - **Name**: Jeremy Smith
  - **Story**: Jeremy is a 10th grade student at Fictional High School, a public high school in an average-sized town. Jeremy's family is upper middle-class with two working parents. He is on the soccer team and wants to be a physical therapist when he grows up. He has many friends and just started a part-time job at his uncle's restaurant. His grades are average and he would like to bring them up, so he can attend the same university his father went to, who is also a physical therapist.
  - **Academics**: Jeremy is enrolled in regular classes (not Honors) and is considered to be performing on grade-level. He has attention deficit disorder (ADD), which makes it difficult to pay attention at times. Luckily, he has a 504 plan, which gives him additional time on classwork and assessments. He is currently taking Geometry, World Literature, World History, Environmental Science, Personal Fitness, and Coding.
  - **Behavior Patterns:** Jeremy is responsible, hard-working, and polite. He does tend to get distracted easily, due to his ADD. He tries his best, though, because he loves playing soccer and the coach expects him to represent the team well. Lately, things have been difficult because school has been online only and there hasn't been soccer practice in a while. Jeremy is beginning to feel disconnected from his friends and teammates. He is still working at the restaurant, but it has stopped seating customers due to the recent pandemic and is only doing take-out orders. This has left Jeremy feeling isolated.
  - **Goals:** Jeremy's long-term goals are to go to his father's university and become a physical therapist. His short term goal is to create an app with a social component using his coding skills that might help his soccer teammates keep up and log their workouts, while motivating one another.
  - **Needs:** Jeremy needs to be social with his friends and he needs to keep up his workouts for soccer. He's really missing playing.
  - **Attitudes, beliefs, opinions:** Jeremy believes that the pandemic will be short-lived and will not affect him more than it already has. He sees on the news that there are people out there getting really sick, but he is mostly concerned with his inability to see his friends and how to solve that problem.

- o **Skills:** Jeremy is a digital native and is skilled at using technology to connect with friends socially and is skilled at using technology to search for things he needs, like information about his future college, shopping online for things he needs, etc. He is becoming more adept at using technology for learning, although he finds it easier to learn on a computer or tablet than on a mobile phone. He is a beginner at coding, but he is picking it up pretty well.
- **User Persona 2:**

- o **Name:** Rana Ahmad
- o **Story:** Rana is an 11th grade student at a Private School located in the suburban area of a big city. Rana's family is middle class. Her father is a known pediatric in the community, and her mother is an active member of the school PTA but is currently searching for a new job as an Arabic language teacher. Her grades are high, and she dreams of joining Harvard Medical School one day to become a surgeon, which means she will be relocated to a different city than her parents and siblings for a long time.
- o **Academics:** Rana is enrolled in regular classes because the private school does not offer many options like the public schools in the same county. However, she has started the (24-Credit Program) over the summer of her 8th grade. She has been taking two virtual courses each quarter and during the summer to cover 24 hours of credit by the end of her 12th grade.
- o **Behavior Patterns:** Rana is dedicated to work her best in school. She is focused and organized. She does a lot of volunteer hours for high school to help those in need in the community. She also volunteers in a Red Crescent Clinic to learn more about the medical field she is interested in pursuing. Last year, due to the pandemic, her school was shut down and forced all students to remote learning options keeping her away from her lifelong friends and volunteering at the clinic. She started to languishing over her dreams of becoming a surgeon and joining Harvard Medical School. Moreover, she began to question if she still has the passion for conquering her dreams and leaving her family behind for that same dream.
- o **Goals:** Rana's long-term plan is to join Harvard Medical School. Her short-term goal is to get higher scores in her SAT through practicing pace techniques of the tests.
- o **Needs:** Rana needs to get her spark again. She needs to stay motivated and never lose hope of what can be possible one day.
- o **Attitudes, beliefs, opinions:** Rana has been worried about how long the pandemic can last. She became hopeful toward the winter break, but the news of the variant has pulled her to think that the situation is endless. She wants to get her intrinsic motivation level up to where it was before the pandemic. She reckons that she can be as strong as her mother, but she dreams of a day the pandemic will be history.
- o **Skills:** Rana is a digital native, but she is dabbler when it comes to user-friendly social media or everyday web surfing. She shops online and makes orders using apps like Door Dash, but she has many elements to learn when it comes to technology. YouTube tutorials are her best friend when she wants to learn a new trick or edit a clip, and she takes medium time to accomplish new tech techniques.

Behavioral Objectives:

- The learner will be able to identify changes in mood and behavior.
- The learner will be able to identify their level of negative emotions.
- The learner will be able to select an appropriate strategy to reduce negative emotions.
- The learner will be able to create a daily agenda.
- The learner will be able to set up a social network (with parental supervision where applicable) to connect with peers virtually.
- The learner will be able to create artwork representing different emotions for display in a virtual exhibition.

Courseware Content:

The Computer-Based Instruction (CBI) will prompt middle and high school students to assess their mental health and well-being on a daily basis and incorporate good mental health habits to improve their lives. It will also provide them with information about preventative actions they can take when they feel unbalanced or unwell. The CBI will provide the students with information to raise their awareness of self, cope with stress, build a routine, reach out to others, and obtain additional care when necessary.

The content for the CBI will consist of presenting information to the target learner, typically with the aid of graphics and/or animations, followed by a self-assessment, and optionally, a closed social network discussion. Our team has access to a mental health counselor and an artist, with whom we will consult as we design and develop this CBI. Additionally, we will use CDC source material to enhance the information provided in the CBI. Further, two of the team members are parents of adolescents, so we will conduct additional surveys and perhaps interviews with them to incorporate their attitudes and perspectives.

Time Scale for CBI:

This course is self-paced, but the learner should spend at least 20 minutes per day accessing the content to ensure that they remain engaged in monitoring their own mental health and well-being. Any module can be accessed or reviewed anytime. At this pace, the learner should complete the course within two weeks. Given the learner's technical skills and reading ability, the time may vary per student.

Instructional Activities and Strategies:

The content will be presented interactively with opportunities for the learner to select information about the topic, as well as vignettes on the topics, assisted by graphics and animations, to illustrate each concept for the learner. Following the information presented, the learner will engage in a self-survey or quiz designed to guide them to monitor their own mental health and well-being for each of the topics. This will enhance their self-awareness and understanding of their well-being at any given time.

This CBI will support the cognitivism learning theory, as it encourages the learner to think about their thinking (metacognition), feelings, attitudes, and perceptions. The social cognitive theory supports this CBI, as we will be incorporating model vignettes, which will help students to see that their actions have consequences and to envision the positive consequences of taking action for their mental health.

In the future, the course will include an optional closed social network component for school districts to take advantage of so that learners can discuss course content and check in with one another, as well as display their art in a virtual exhibit. This would likely not be available on the open web due to privacy and safety concerns.

- **Activities:**
  - Our activity will be divided into six sections, each of which will cover one of the course objectives in various ways. The students are given a series of introductory 2-3 minute lectures on the significant psychological symptoms of pandemic mental health situations, after which they can watch a video, read a portion of an article, and perform an evaluation check by answering a few surveys questions. The aim is to classify feelings based on what they learned in the reading and lecture.
  - The second section discusses how to be a change-maker and concentrate on their ability to help others by discovering their own skills.
  - In the third section, a video of guided imagery is included to help them practice mindfulness, which will improve their overall well-being.
  - A 2-3 minute guide on creating a routine will be included in the fourth section. There will be some reading material to support the power of keeping to a daily schedule and its impact on positivity by maintaining control over one's day.
  - The fifth section allows students to vent and interact by discussing concrete potential aspirations and what they want to do after the pandemic.
  - In the sixth and final section, we will have students create original piece of artwork for their peers to cope with the pandemic as an art therapy project. This is one way to get them involved in helping others, but having positive thoughts of themselves by becoming a change-maker in their community during the pandemic is an element adolescent look for to rebuild their intrinsic motivation (Fleming, 2021). According to psychological medical science, creating art and participating in art therapy primes relationships between adolescents and their peers, which positively impacts the adolescents' well-being (Rileys, 2001) (Miller & McDonald, 2020.) We also have access to a subject matter expert on Art Studio and Art Education.
    - **Prototype Modules (Outline)**
      - **Introduction**
        - **Covid (Effects of Covid on Mental Health in Teens)**
        - **Objectives (What You'll Learn)**
        - **How to Use the Module**
      - **Module 1: Identifying different emotions**
        - **Teach: What are emotions?**
        - **Teach: How do I identify emotions?**
        - **Teach: Why is this important?**
        - **Vignette/Formative Assessment (3): (Model with animations/ choose the emotion)**
      - **Module 2: Choosing a coping strategy; Art Therapy**
        - **Teach: Methods for self-assessment**
        - **Do: Self-Assessment**
        - **Teach: Coping Strategy (graphic examples)**
        - **Do: Art Therapy (off-screen; take picture to post online)**
        - **Challenge: Continue Art Therapy based on emotion of the day for at least two weeks (try at least 15 mins)**
      - **Assessment (Assess understanding of well-being)**

o **Strategies:**
  - o Presenting information that will require students to self-reflect and self-assess their mental health.
  - o Presenting model vignettes to model goals, tasks, and behaviors for the learner.
  - o Presenting model pieces of artwork to present choice and possibility for the learner.
  - o Asking questions of the learner to give them an opportunity to reflect on their lives and thought processes.

Materials:

This computer-based instruction will be designed using Articulate Storyline and either PowToon or Vyond, as well as Adobe Suite for graphics, and published with an internet link to enable it to be easily accessed from the client's website, as well as embedded in any school district's learning management system (LMS). This will require the learner to have access to either the internet or school-based LMS, as well as headphones or earbuds to enable audio narration. Students will need a digital camera or a camera-enabled phone that will allow them to post the photos, as well as art supplies (user choice).

Setting/Method of the Courseware Delivery:

Since this CBI is designed for middle and high school students, most students will be participating in this course through their school. If they are currently attending school face to face, they may be in a computer lab or classroom setting. If they are currently attending school through distance learning, they should already have a computer or tablet at home. Either way, the laptop or table should be up to date and have access to internet/wifi. Learners on the school campus should have access to headphones to enable audio narration without disturbing others and those learners at home may wish to consider it.

The final step of art-based therapy will take place in school or the user's home and be shared online to spread hope to other adolescents (we may use a closed social media network or open social media here).

Assessment:

Throughout the course, the learner will complete various self-assessments correlated with the goal for that particular module. For example, after completing the self-awareness module, the learner will complete a self-assessment of their mood, feeling, attitudes, etc.

After completing the course, the learner will complete a summative check for understanding to ensure they understood the course content and can apply it to their everyday lives.

Tentative Group Members' Responsibilities & Implementation:

- Lynda: Communicate with SME, Adolescents; Storyline
- Renee: Monitor Progress, Animations
- Nada: Communicate with adolescents, Initiate Documents, Graphics
- All Members: Develop storyboard/wireframe, course content, and supplemental materials.

Appendix A

Team Contributions

See below for the individual contributions to this assignment.

- **Renee - Integrated** relevant FEA info into document; Began writing all other parts except Instructional Activities; User Persona 1; Edited final document
- **Lynda –** Initiated Document with formatting and headings, Wrote Abstract; Contributed feedback on instructional methods and materials during conference call.
- **Nada – Contributed** Extensive Feedback on multiple parts during conference call; Instructional Activities; Photo Collage info; User Persona 2
- Revisions were made equally by all members in a Teams Meeting while sharing the screen.

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