**Applied Positive Psychology**

**Professor Dilwar Hussain**

**Department of Humanities and Social Sciences**

**Indian Institute of Technology, Guwahati**

**Week 10**

**Lecture 29: School-based positive psychology interventions**

I welcome you all to module 10 of this course, and today's lecture is lecture number 26. So, we have already discussed module 10. This is a module on specific interventions in positive psychology in the context of education and classroom teaching. And today's lecture will focus on school-based positive psychology interventions. So more specifically, we'll be focusing on certain evidence-based interventions that have been carried out in the context of schools.

So, before we talk about today's lecture, let me give you a brief recap of the last lecture. So the last lecture was also part of the same module, and this was the first lecture. So, in the last lecture, we discussed the concept of positive education, its meaning and what is the main focus of positive education. We also discussed some of the broader theoretical frameworks that are used within positive education; these frameworks can be directly applied in this context. Then, at the end, we discussed a particular case study on how positive education has been implemented in a school. So, we gave an example of the Geelong Grammar School case study to understand how this whole positive education program has been implemented in a school setup. So, these are a few things that we discussed in the last lecture.

In today's lecture, we will be focusing on some of the more diverse aspects of the positive education program and how they can be implemented in the school context. We'll be focusing on positive psychology interventions for positive education. We'll focus on very specific school-based interventions like mindfulness, character strengths, resilience, and positive relationships in schools. The last lecture was more about a broader framework that can be used; in this lecture, our focus will be more on specific interventions and the research evidence associated with them.

Let's start today's lecture. So, as we have already discussed, the positive education in school focuses on applying some of the principles of positive psychology within the school setup and curriculum to enhance students' well-being in addition to all the traditional school curriculum and the teaching and learning that are going on. So, the focus is to make a

holistic development of the student, not just the typical academic curriculum that is given. The well-being of the students is also taught. Now, positive education is relatively new in this context because it emerged with the development of positive psychology as a branch of psychology.

Research has already demonstrated its successes in schools due to its alignment with the broader 21st century schooling idea. So positive education became popular in the sense that this whole idea of holistic development of children and focusing on well-being is a broad idea within the 21st century schooling curriculum. It very seamlessly merges with the concept of schooling itself, so therefore there was no resistance or problem in terms of conceptually or theoretically studying it. Some researchers argue that schools are uniquely positioned to bridge the gap between positive psychology's goal of promoting human development and the institutions that can facilitate that growth. Schools are the best place to implement positive psychology programs simply because this is where the foundations of a human personality start.

This is the best place where we can implement a lot of positive psychology programs. Now, why is there a need for well-being in schools? We all intuitively understand that there is a lot of need for enhancing well-being within the schools, but let us see some of the specific reasons why it is important. Now, an interdisciplinary group of researchers from the US and Canada is called the National Scientific Council on the Developing Child. In 2006, they stressed the importance of education in fostering well-being, which is defined as feeling good and functioning well alongside the traditional academic skills.

So this underscores the need for schools to prioritize emotional well-being and social capacity to prepare for the complex. So, students are learning whatever academic skills are required. But when we talk about human life, academic skills are not enough. When they go out and when we need to prepare students for the future, they also need to be ready to face the challenges and problems of life. So their wellbeing is very important.

Now, today's students face a future marked by rapid technological changes, such as the way artificial intelligence is changing the dynamics of job situations and education setups. And these technologies are growing and changing very quickly. Things are changing very rapidly around us, especially the technological changes that are happening, along with changes in social situations, the job market, and organizational situations; everything is changing. There is also environmental degradation, global warming, poverty, health pandemics, and social and environmental challenges.

So many things are happening rapidly around us. And in such a dynamic world, we need to prepare students to face all these challenges and adapt to them. That is very important.

So that is where positive education can help. So, in the context of India, let us see some statistics.

The National Mental Health Survey of India in 2015-16 estimated that about 7.3% of adolescents aged 13 to 17 years suffer from mental disorders. About 7.3% of such adolescents are affected. This translates to approximately 8 to 11 million adolescents requiring mental health care at any given point.

So, these surveys are basically those that take samples. The numbers may be much more than that. So, this is a huge number when this percentage gets translated into actual numbers, about 8 to 11 million adolescents. They actually require mental health care at any given point in time. The lifetime prevalence of mental disorders across all age groups in India is estimated to be about 13.

Now this percentage may look small, but when it is converted into such a large population, the numbers are huge. So, according to this Global Burden of Disease Study in 2021, mental disorders affect approximately 14% of adolescents aged 10 to 19 years in India. About 14 percent of adolescents are affected by some mental disorders, according to a recent survey, with 13. 4 percent of boys and 13.9 percent of girls experiencing some form of mental disorders.  So, this is the age where they go to school, and the school setups can influence their minds. In the context of India, we have seen some statistics, and these statistics are equal to those in any other countries as well.

For example, we also have statistics for countries such as Australia. So, in Australia, about 25% of young people aged 15 to 19 have mental disorders. So their percentage is more than ours, but in actual numbers, that may be less. One in three experiences moderate to high psychological distress. Specific issues in the context of Australia are depression, anxiety, body image concerns, substance abuse, and so on.

These are common problems in every country. So, when you talk about mental problems and issues, these disorders come at the top- Depression, anxiety, substance abuse, and body image concerns. The adolescent group has issues that are among the top concerns related to mental health. So, this scenario is almost the same everywhere.

There is a large percentage of people in this particular age group who are having a lot of mental issues and psychological disorders, and they are not getting the right kind of help and treatment that is required, and there is not enough awareness about that. To address these rising mental health issues, it is crucial to equip youth with resilience. So it is very important that they are also trained in the school setup itself so that they can prevent these issues or at least take care of them and have some understanding and awareness about it.

So they need the concept of resilience, which is a very important concept of hope, higher-order cognitive skills, social skills, and emotional skills to lead a more meaningful life.

Otherwise, they will not be able to productively function in society. So that foundation has to be built in the school. So, these positive psychology interventions are highlighted as a means to support all these social-emotional skills. In building a holistic development of a student, we need this kind of intervention in the school itself.

Now, in the context of positive education, we have also discussed certain frameworks that are generally used in the context of positive education in the last lecture. A lot of this is related to positive psychology concepts, so the main aim of these positive psychology interventions is to cultivate positive emotions, behaviors, and thought processes, and they are grounded in various theories, like Seligman's PERMA model, which focuses on various ingredients of well-being, and so on. Now, unlike initiatives that reduce negative factors, a lot of initiatives are done in the schools that are related to reducing negative factors, like anti-bullying programs. Programs that are just trying to cut the negative influences are okay.

They are one part of the story. But we also need to build certain positive qualities within them. Just cutting negative things may not work. So positive psychology interventions build positive factors as well, apart from reducing the negative factors. Research shows that well-being enhances academic performance.

For instance, a meta-analysis by Durlak and colleagues in 2011 found that students in social and emotional learning programs scored 11% higher on achievement tests. So if we take care of the well-being of the student, including emotional and social well-being, that will also enhance their academic performance. So it is a win-win situation. So that is why it is very important in that context, and positive psychology can contribute in this regard. Now let us look at some of the school-based positive psychology interventions.

So, in this lecture, we'll focus on some school-based interventions that use positive psychology to foster student well-being and academic performance. So in this lecture, we will discuss specific interventions that are based on documented impact on school engagement, performance, and well-being. So, these are evidence-based interventions because the research has found that these can contribute significantly to promoting well-being. These interventions aim to address both academic success and student well-being, aligning with the goal of 21st century education.

So, they focus on both because enhancing well-being also enhances performance and academic success. So, let us look into some specific interventions. One such intervention

is called mindfulness in the school setting. We have already discussed the details and the concepts of mindfulness and its practices in the earlier module. Here we will not focus on specific conceptual clarity regarding mindfulness. We will focus on how this can be implemented in the schools and what possible outcomes can arise from the research. So, mindfulness, as we already discussed, is defined as a awareness that arises when you pay deliberate, non-judgmental attention to the present moment.

Therefore, mindfulness is about becoming more conscious and paying attention. In the present moment, when you suspend the judgmental thought processes, you don't judge anything; don't have ruminative thought processes which are the reasons for all the negative thought processes and all the unnecessary suffering that human beings experience. One thought leads to other thoughts, especially destructive and negative emotions. So mindfulness can break those patterns by becoming more conscious in the present moment and paying attention to the present moment. And it is done through certain methods like one can start by focusing on the breathing. So we have talked about all the details. So when you become more conscious and pay attention to things that are in the present moment, the automatic ruminative unconscious thought processes get slowly, their frequency decreases. And that is a very peaceful experience that enhances happiness.

So this became very popular because mindfulness has been found to be helpful for all kinds of psychological problems, provided you do it in the right way. And a lot of research evidence is available for its contribution to well-being. So, in educational settings, mindfulness is increasingly recognized for its potential to enhance attention. When you practice mindfulness, you train your attention. To achieve success in any aspect of your life, attention is important. Without attention, you cannot learn anything. And one of the major challenges that students face is that they cannot pay attention. And because of that, their learning capacities are hindered and so on. So mindfulness helps you learn to pay attention, enhance attention, concentration, and self-regulation, which are all important aspects of contemporary educational goals. People are better able to regulate their emotions. They are able to pay attention. Their ability to focus on things also enhances which can improve academic performance and also help regulate emotions; in that sense, it will enhance your well-being. Conceptually, in terms of other setups, mindfulness has shown a lot of promise and benefits. But in terms of integrating this long-structured program in the schools, there may be certain challenges, particularly the time commitment required for a traditional mindfulness-based stress reduction program. It is a very long program.

It needs weeks of training. So those programs may not be feasible in many school setups. However, shorter sessions have shown promise in introducing students to mindfulness, helping them learn, direct their attention, and integrate mindfulness into daily routines.

These short-term sessions on mindfulness have been integrated widely in various schools, and they have been found to be very helpful for students in terms of paying attention, learning, focusing on tasks, and it could be very easily integrated into the school curriculum, with short sessions.

For adolescents, certain short mindfulness programs were developed for the school curriculum, such as Mind Up, Inner Kid, Learning to Breathe, and so on. All of these have been implemented successfully in various school setups. So these programs aim to cultivate present moment awareness, which is the main aspect of coming to the present moment because the mind always roams around the past and future or unconsciously thinking about something that may not have much relevance. The mind is necessary for solving problems and that is not the problem, but most of the time the mind wanders around everywhere unconsciously, and we are not able to pay attention. So, you become more conscious and direct your attention to present moment awareness. You don't judge things when you are in that moment. So that enhances nonreactivity. You don't react automatically or unconsciously to the situations of life. You have much better control, which helps in emotion regulation, reduces maladaptive coping strategies, and enhances well-being. So all these programs have been found to have a lot of benefits. They are short-term programs, when done consistently, can have a very long-term impact on students and so on. Even neuroscientific research supports the benefits of mindfulness, showing structural and functional changes in the brain. When people do it continuously, certain changes happen in the brain itself that are like positive changes related to improving attention, emotional integration, and so on. So while studies on the impact of mindfulness on academic performance are limited, many mindfulness studies have been done in various contexts, but relatively fewer studies are conducted in schools. But preliminary evidence suggests positive effects on cognitive function. It helps to improve their thought processes, emotional regulation, social competence, and so on. So some evidence, at least recent evidence, shows that they can be beneficial in certain dimensions.

 Improvements in language and study skills among students also occur with practicing transcendental meditation. Mindfulness practices have been linked to better emotion regulation, which is crucial for academic success and well-being. So these are some of the pieces of evidence that researchers found in the context of mindfulness when it is implemented in the school setup and so on. So, in summary, mindfulness offers a valuable tool that can enhance attention ability, help us regulate emotions, improve social skills in students, and benefit academic performance.

 So, these are all important goals of education. All of this can be enhanced through mindfulness. Obviously, we need more research in that direction, and more structured programs need to be developed for school settings and so on. The next interventions that a

lot of research shows have a lot of promise in terms of school setup are character strengths in the school setting. We have discussed the framework in the earlier lecture, but here we will be focusing more on it as an intervention and its evidence.

So let's talk about character strengths in schools. So the strengths we have already discussed are about certain intrinsic characteristics or certain traits of people, which may include thoughts and feelings that are morally desirable traits, and so on. And research shows they can promote well-being, positive relationships, goal achievement. While most of the research on strengths has focused on adults, strengths can also be identified and nurtured in children from the right perspective in schools. But we have less research in the context of children. So positive psychology research emphasized that using existing strengths in new ways is more effective for enhancing well-being than developing entirely new strengths.

So people already have a lot of strengths within them. Every human being has certain character strengths. So if you know about them and develop them, it is much easier because it is already within that person. You need to refine them rather than develop a completely new character. So one of the benefits of character strength training is that people already have a lot of strengths. They may be dormant; people may not be aware of them, so we can identify them and train them in terms of becoming more aware of their strengths, which a lot of questionnaires and assessment tools can do, and refine them to use them in new ways in their day-to-day life, getting the most out of them.

Working from strength rather than focusing on just weaknesses has been shown to improve learning. When people are not good at something, they become defensive about it; they don't want to acknowledge that they are not good at it, and even if they do acknowledge it, there is no motivation because they are not good at it. Working on weaknesses is always difficult, but when you have certain strengths, it is much easier because you are automatically intrinsically motivated to do that since you are good at something.

Motivation is required when you are not good at anything. Then it is very difficult because you don't get the necessary energy and motivation to do that. People become defensive about it. So working from one's strengths is much better in terms of enhancing learning, performance, motivation, satisfaction, feelings of mastery and competence, and so on. Obviously, one can work on weaknesses, but focusing from a strength perspective has a lot more benefits in that context.

Researchers like Wagner and Ruch found that character strengths like perseverance, self-regulation, prudence, social intelligence, and hope are strongly correlated with positive classroom behaviors. So certain strengths are very important in the context of classroom

behavior and performance. Some of them are listed here. A positive classroom climate, as highlighted by the prosocial classroom model, is closely linked to students' well-being and academic success. Also, some of these character strengths in youth, such as persistent honesty and hope, are linked to lower aggression, lower anxiety, lower depression, and predict academic performance beyond IQ level. So academic performance is also positively influenced by many of these character strengths. Certain character strengths, like self-discipline, in one study showed that in eighth grade, they outperformed IQ in predicting academic success, so self-discipline was more important—better than IQ—in terms of predicting academic success, and curiosity in fourth grade predicted academic achievement in sixth grade. Therefore, certain character strengths like curiosity and self-discipline were found to be significant.

Also, let us review some of the specific school-based programs in character strengths, how some of these interventions were actually done in schools, and there is some research evidence to support that, such as the Strengths Haven Positive Psychology Program in the U.S. This program focuses on character strengths. It teaches students to identify and use their character strengths through 20 to 25 lessons based on the VIA framework that we discussed earlier.

So, this is a particular program that is used as an intervention in the schools. So, in the US, certain schools have used this program where certain lessons are taught to them, and the main idea is to identify the different strengths that students have and how to use them more. A study by Seligman and colleagues in 2009 with 347 nine-year-old students found that participants in this program reported greater school enjoyment and engagement, while teachers noted improvements in curiosity, love for learning, creativity, and social skills. However, no significant change in depression or anxiety was observed, but certain things that they found improved when this program was implemented in the schools.

They found that the students reported more enjoyment and more engagement in the school curriculum. Teachers also noted that they had become more curious. The love for learning, creativity, and social skills improved a lot. In Australia, another strength-based program was conducted here by Madden and Kulig in 2010. They evaluated a strength-based coaching program for 5th-grade boys using the VIA framework.

Over eight sessions, students identified their strengths, set goals, and wrote letters from the future. So these were some of the activities they did, and the posted results showed an increase in hope and engagement, indicating program effectiveness. In another study, Austin compared students in a six-week Gallop Strength program, which we have already discussed earlier, with a group of students in the strength program where strength was taught to them. The Gallop Strength program is another framework where certain work-

related and professional-based strengths are also taught, identified, and then refined in that context. They reported higher academic expectations, self-efficacy, and motivation which demonstrated the benefit of integrating character strength into the school curriculum. This study shows that character strength can be taught in schools if proper programs are implemented, which can improve social skills, engagement, hope, academic performance, and so on. So there is a lot of promise in this direction if it can be implemented properly. Obviously, there are challenges to which we have also discussed in the last lecture.

Now let us look at that resilience. We have discussed this concept of resilience and the research on resilience and interventions in the earlier modules. Here, the focus is on the school setup and how certain programs have been implemented. So we will focus only on evidence-based interventions, not on the concept details. Everything is in the earlier modules. So resilience is mostly about the ability to bounce back from certain adversities in life.

When something goes wrong in one's life, how quickly you can come back to your normal functioning level is important. Schools can teach resilience to students with certain problems because this is a very important quality; we all face different problems in life, and if we are able to adapt to them quickly, then we will be able to function in much better ways. Therefore, schools that deliberately design positive psychology interventions to build resilience in students can significantly impact their well-being and learning outcomes, as it is directly related to one's functioning level. In the context of research, there are two popular curriculum-based resilience programs available.

One is the Penn Resilience Program, which we discussed a little bit in the last lecture as well. Some of the major components of this program we have discussed. I will just talk about some evidence here only because of the program we discussed in the last lecture. Another program is called You Can Do It (YCDI). These are specific programs that focus on building resilience in the school context. And both of these have been shown to reduce distress, improve well-being, and promote learning. So we'll see a little bit more evidence on that. Penn resiliency program is a widely implemented curriculum designed to enhance student resilience. So the basic details we have already discussed in the last lecture. Here, it teaches skills such as cognitive reframing, assertiveness, decision-making, coping strategies, creative brainstorming, and relaxation.

It's a very elaborate program which is also a kind of limitation because it may include a lot of costs and so on. So, this program has been used with students aged 8 to 15 in countries including the United States, the UK, Australia, China, Portugal, and so on. Various countries have implemented this program in schools and have found a lot of benefits. A review of 17 studies involving over 2000 students found that this Penn resiliency program

significantly reduced symptoms of depression, hopelessness, and anxiety compared to control groups.

So this is not based on just one school. Many schools across the globe have shown the benefits of this program, and the results show the benefits are actually long-lasting, not just temporary improvements in well-being over two years. Even when the follow-ups are done after two years, the results are still there; the impact is there. So these are some of the pieces of evidence associated with the Penn Resiliency Program. Another program that is also focused on enhancing resilience is the You Can Do It program, or YCDI program.

The You Can Do It program is a social-emotional learning and resilience-building framework developed by Dr. Michelle E. Bernard. So, it is widely used in schools to promote student well-being, resilience, and achievement by targeting cognitive and social-emotional learning. So, it focuses on social learning, social skills, emotional skills, and cognitive skills in terms of enhancing them for the students.

It focuses on teaching social-emotional resiliency skills such as confidence, persistence, organization, interpersonal skills, and other important skills that are essential for navigating life and achieving success. All these skills are also taught in this program. This program focuses on positive thinking patterns taught in social-emotional learning. For example, how to think positively and constructively is also taught in this program. For example, some of the examples are: "You can do it," "It builds confidence," and "I try hard and don't give up," which builds persistence.

It's okay to make mistakes. It builds emotional resilience. I work well with others, building relationships. I plan my work and use my time wisely, which builds organization. These are some examples of how you can teach students to think in the proper direction. Just changing thought processes can build confidence, persistence, and emotional resilience because these are all related to how you think about things. So, if you can teach them properly a lot of these qualities can automatically develop.

This is what this program does. This program also addresses negative habits of the mind that creates an obstacle in their path to success. For example, thoughts like "I must be perfect; I can do anything right; It's too hard for me." These are things that a student or people learn from society from their childhood onwards. When they are not able to do something, they develop a thought process: I cannot do it. So this thought process becomes very unconscious and deep down, it always creates obstacles in the path of success.

So, in this program, they try to teach how to modify this thought into more constructive thoughts, and so on. So, it teaches students how to replace these thoughts with more helpful

self-talk. In a study by Barnard and Walton in 2011, they compared a fifth-grade student from six schools that implemented the You Can Do It program (YCDI), which included 349 students, with students from six control schools where this program was not implemented. So, six schools where this program was implemented and six schools where this program was not implemented were compared.

So, they assessed the impact of this program using something called a student attitude to school survey. Researcher assessed well-being, teaching, and learning baseline one year later. So, baseline before the program was introduced, these measures were taken, and this program was introduced, and after one year when this was implemented, again they took measures to see whether there was a change in the scores of well-being and so on. What did they find? Students in YCDI schools where this program was implemented showed significant improvement in morale, stimulating learning, school connectedness, motivation, learning confidence, peer connectedness, classroom behavior, safety, along with reduced distress. Where they found control schools, only reported improvement in classroom behavior and safety. So, when they compared the control schools to the schools where YCDS was implemented, they found that many positive emotional and social improvements had occurred for the students, while such things were absent in the control schools where this was not implemented, just to make a comparison.

So, these studies at least demonstrate that resilient building programs like the Penn Resiliency Program or the You Can Do It program have a lot of potential to enhance students' resilience, emotional skills, social skills, and so on. So, there is a possibility that this could really make a lot of positive changes provided we can implement them properly. The challenges and other things we discussed in the last lecture indicate that, for implementing such a program, there are obviously a lot of challenges in the schools that can create problems.

Then comes a positive relationship in schools. This also plays a very important role because emotional well-being comes from relationships. So let us look into some of the studies that examined the positive relationship aspects in schools in terms of intervention. So this positive relationship, again, we have a separate full module on it. So I will not go into the conceptual details, theories, and so on.

Here, the only focus is on the context of school setups. When we talk about positive relationships, we are talking about supportive interactions and cooperation with both teachers and students. So the relationship includes the relationship with the teachers, the students, and what the dynamics of that relationship are. And this is very important for well-being because much of our well-being is actually derived from relationships. Because we are social animals, we connect with people, and a large percentage of our well-being

actually comes from our relationships.

Research by Deiner and Deiner in 1995 found that the quality of social relationships is the only factor that consistently predicts happiness across cultures. A study by Deiner and Seligman in 2002 also found that one student over two months revealed that happiness levels were closely linked to coping with stress, which were enhanced through social support and so on.

When you have a supportive network, people help you deal with the problems in your life. Prosocial behavior, such as acts of kindness, increases well-being not only through social support but also by fostering positive emotions and happiness. Positive relationships also involve helping behavior, and all these things enhance well-being. Research shows a positive relationship that improves both individual and collective well-being, which in turn enhances problem-solving and learning.

So these are different findings which show the significance of it. Theories like self-determination theory highlight that well-being is supported by fulfilling three basic psychological needs: autonomy, competence, and connectedness or relatedness. So we'll talk about self-determination theory in detail in the next lecture because this is one theory that also looks into the relational aspect and how this can increase motivation in our lives. So, I will not discuss it here because the next lecture is actually dedicated to this theory. So, this theory also looks into why a positive relationship is important in one's life.

So, we will look into that in the next lecture, where we will explore other aspects of it. So, positive relationships and pro-social behaviors such as acts of kindness meet these needs by being self-determined. So, this is related to this theory. I will not focus on it here. So, however, when you talk about relationships in the context of school, there are a lot of paradoxical things. You cannot just look at relationships very clearly in a very straightforward manner because cooperation is valued in the school setup, but the competitive grading system implicitly prioritizes individual success over collective well-being.

You cannot just preach that because this whole setup is explicitly a concept of a grading system where students compete with each other. So there may be a possibility of competition rather than cooperation. So that is an aspect one has to deal with in a very sensitive way. The student often receives mixed messages, understanding that their success may be at the expense of others. So in the context of school, if you see that one student is successful or getting a better grade, it may be at the expense of another student because another one has gotten less than you. So, it is always the case that a sense of competition is present in the context of school because of the kind of system that we have in place. So,

that is the main challenge in the context of positive relationships in the school setup.

However, certain schools and systems of education try to use various models of cooperative learning where competition is not present, everybody cooperates to learn from each other. Certain experiments were conducted to enhance this positive relationship. One such concept that was developed is called the jigsaw classroom. Although it has not been very widely used until now, certain schools have tried to do that. So we'll look into this concept of cooperative learning, where learning is not competitive with one another, but a cooperative learning system can be promoted by jigsaw classroom teaching.

this was used and implemented to address many of these issues of conflict within the schools and among the peers. We will look into how this is done. So many studies have shown that cooperative learning promotes acceptance of others, cooperation, prosocial behavior, and so on. So this obviously has certain benefits when the learning system itself is cooperative rather than competitive. The whole concept of the jigsaw classroom, which is based on the model of cooperative learning was developed for a particular reason. It was developed by Elliot Aronson in 1971 at the University of Texas, Austin. The focus was on promoting collaboration by making students interdependent in achieving a common goal. The focus was on such classrooms that students become interdependent on each other to learn something i.e., a common goal of learning. So, everybody has to depend on others. So there needs to be cooperation rather than competition to reach the goal of learning some topics. It was originally developed to reduce racial conflicts in schools because there are many schools where students from different backgrounds come, especially in the West, where, let's say, black students and white students exist, leading to racial conflicts. To reduce that conflict, this concept was actually introduced initially to promote cooperation among the students and foster positive interdependence with each other. Especially in desegregated schools, which are schools where people from different backgrounds and different races come together to study. So the technique is now widely used to foster collaboration, comprehension, and harmony in classrooms of all levels.

Now this has also been implemented in the general setups. So the core idea of the jigsaw technique is that students work in small interdependent groups. So the student has to learn in a group setting. Small groups are formed in a class, and they have to collectively learn from each other, with each member becoming an expert in a specific aspect of a topic. So we'll talk about how it is done in a stepwise manner. Then it will become much clearer. So, each student becomes an expert on a topic, and then they learn about the topic, and this expert then teaches their peers. All group members have to become experts on one topic, so everybody has to be very engaged. In order to comprehensively understand the material or the topic, let us see stepwise how it is done. First, what is done in the jigsaw classroom is that the students are divided into small groups called home groups, so each group may

include four to six students.

So let's say A class has 20 or 30 students. So, 4 to 6 students are divided into small groups. So, first, this is how it's done. Students are divided into small groups. Then, assign each member a unique subtopic of a broader topic. So, each student in the group gets a different subtopic to learn and later teach to their group.

For example, the topic is, let us say, the continents. Let's say that in a school, we have a chapter on the different continents of the world. Now, each student will learn a subtopic of that topic. So the topic is continent, and the subtopic can be Asia, Africa, Europe, North America, South America, or whatever it is. So there are different continents. In each group, each student will choose one topic. So let's say there are five students in the group. Student One will learn about Asia. Student Two will learn about Africa. Student Three will learn about Europe. Student Four will learn about North America. Student five learns about South America. Everybody has to learn about different subtopics of a broader topic. So the teacher will assign that to each student.

Now, what is done next? Each student focuses on the subtopic that is assigned to them. They are responsible for learning it well and becoming an expert on that part. For example, student one is given Asia; they have to become an expert on all the concepts related to Asia. Here, student three is responsible for Europe, so that students will learn everything about Europe. He or she must learn about Europe's geography, culture, population, land, etc., whatever is given, they have to learn it. Then what happens? There is an expert group meeting. Students with the same topic from different groups meet in the expert group. For example, Let's say this is Group One. Student one will have Asia, and so on. So, in every group, there will be student who will have the same topic, let's say Asia or Europe (3rd group). In the expert group, what they will do is have students from all the groups who have the same sub-topic, let's say student 3 of group 1, student 3 of group 2, student 3 of group 4, or student 3 of group 3; they all have learned about Europe. All these students from all the groups of the same sub-topic will meet together; this is called an expert group meeting. So all these students have become experts in the same sub-topic. So here they will discuss it further to enrich their understanding. Everybody has learned about Europe. So they will again further discuss each expert from the groups, and they will discuss research to clarify the topic together sometime, using teacher-provided resources. For example, here all students who are assigned Europe from groups A, B, and C meet together to study Europe.

This is collaborative learning, so every student may add something new, and they will all learn in a much better way. So this is step four. Then what happens? This student again returns to their original group. Now, everybody has refined their understanding much more.

Not just individual learning but learning from other students also in the same topic or subtopic. This student then returns to their original Jigsaw classroom and teaches the topic to the group, and the rest of the group listens, takes notes, and asks questions. So this student, let's say student 3, became an expert on Europe and returned to their original group. Now they will teach about Europe to their original group. And others will learn, listen, ask questions, and so on. Similarly, all the other students in the group, let's say student one and student two, also learned some different topics. They also met again similarly, and they will come back to their original topic, and they will teach them.

So this is what the student can learn collaboratively, and it is a much more engaging process. This is how students will learn and teach. Obviously, the teacher will assist in all the processes. So the last step is group integration and discussion. After all the members have shared the groups, they now understand the full topic because everybody has learned and taught their own groups about all the continents. So student one will teach Asia, student two will teach parts of Africa, and so on. So when they meet together, they have learned and understood all the subtopics of a topic. Teachers can have students complete a group task, poster, quiz, or classroom activity. The teacher can further facilitate the process and so on.

So in this process, it's more of a collaborative, cooperative, and engaging process. This may take more time. It may have its own challenges. But this was originally done to reduce conflicts among the races and make students interdependent on each other so that they would cooperate more. So there are a lot of benefits of cooperative learning methods like Jigsaw that have been extensively documented. Research shows that compared to the traditional competitive or individualistic approach, cooperative learning enhances students' achievement, improves attitudes towards the subject, strengthens peer relationships, and increases retention rates, and so on.

Because the students themselves are engaged, they have to learn and have more responsibilities. Now, it is not like passive process. The teacher is teaching, and the student is just taking notes and so on. So, certain variations of this jigsaw technique have been implemented in different contexts and have been effectively employed in undergraduate courses across diverse disciplines such as statistics, philosophy, biology, geology, language courses, psychology, chemistry, and so on. Lots of places have used this with certain variations. Obviously, depending on the classroom size certain variations can be made and have been implemented successfully in various setups.

So, reported benefits are basically that students themselves get a lot of responsibility. When responsibility is given to them, that is when they have to be engaged. They cannot just take it lightly because they have to teach their groups. So, it enhances responsibility,

greater engagement, more frequent questioning, dependence on peers—all these are positive things in terms of cooperation. So, by practicing self and peer teaching, students deepen their understanding of the material and enhance their communication. It also helps them enhance their communication skills because they have to teach now. Additionally, the method ensures that every student's contribution is essential. No one can sit idly. Everybody has to contribute because everyone has to learn a topic. So, this engagement becomes automatically active in these processes.

So, generally, this method promotes both academic success and the development of critical interpersonal skills, and so on. Now, overall, we have talked about certain specific concepts or interventions, including the evidence-based intervention we have discussed. Now, cultivating positive education in school obviously has certain challenges, which we also discussed in the last class. Now, what can we do in terms of actually and effectively integrating a lot of these concepts in the schools? What can be done? What should the ways be in terms of going ahead? Waters (2012) provided four key factors, which I think are very significant and can be looked at in terms of implementing this positive education in schools.

One is extending positive psychology topics into traditional academic disciplines. So, a lot of these topics can actually be included in the curriculum itself. That is the best way because then there will not be an additional burden of integrating a lot of these positive psychology concepts that we discussed, like gratitude, resilience, and character strengths, into existing subjects like arts, language, and health which can enhance student well-being while maintaining academic rigor. Now, if it becomes a part of the academic curriculum, it becomes much easier to implement it. So this approach will ensure that positive education becomes seamless. Otherwise, if it is given an additional task, it will be very difficult to implement. So it should be integrated into the curriculum itself. That is one way to integrate it.

Second, one has to use a whole-school approach. It should not be based solely on classroom teaching. Using a school-wide approach is another important aspect. So implementing a positive education initiative across the entire school should be prioritized rather than just isolated classroom teaching which can create a cohesive, supportive environment, and students will learn it when they apply it in other contexts as well. Just teaching them probably will not be just a conceptual thing. So a school-wide approach ensures that all students and staff benefit from the principles of positive psychology, fostering a culture and so on.

We have already talked about how Galang Grammar School was implemented in the last class. It was a whole-school approach. So that is a very good example of how a school-

wide approach can be implemented. So initially, the staff and teachers learned it; then they taught it to the students, and it was implemented in the culture of the schools, such as in the assemblies, on the school notice boards, and so on. So it was implemented everywhere. So that is a very good example of how a school-wide approach was implemented. Then it becomes much easier because the students not only learn the concept, but they also apply it.

Using a strategic framework to guide the rollout is also very important. Adopting structured framework to introduce the sustained positive psychology initiative can help schools systematically implement. So it is very important to systematically implement it in a structured way, step by step. Maybe everything cannot be implemented at one time, so structured more systematically, sustained step by step, things can be much more doable. One can focus on what problems are arising in terms of achieving goals, and thus strategic planning is also very important.

Then the most important thing is the support of the role of a larger educational system. If the larger education system itself is not supportive, then people will not be able to implement it. Some schools will implement it, but after some time, they will just forget about it because this whole policy is not in sync with that. So, it is very important that the larger education system should have a policy towards that. Broader educational systems, including policymakers and educational authorities, can provide resources, training, and legitimacy. They are the ones who develop textbooks; also, they can integrate that and instruct schools to conduct workshops and so on. If they show willingness, obviously the school has to follow that. So that top-down approach also has to be very important. See, the collaboration with larger systems ensures that positive education is prioritized and sustained across multiple schools and regions. Otherwise, it will become just a local phenomenon of only some schools, which are financially doing great. Other schools will not be able to do that, so the larger education system policymakers have to show the willingness towards that. The need for it is obviously researched and has shown that it is important and needed, but that implementation part also has to be supported by the larger education systems; then only can it be implemented.

So these four factors can be highlighted and focused on in terms of how to implement all these positive education programs and interventions in the schools. School can effectively promote the well-being and holistic development of the students. So, these are some of the things about certain interventions of positive education, which are derived from positive psychology, that can be implemented in the school setups, as well as the challenges we have discussed through these lectures. We have one more lecture of this module that will focus more specifically on motivation. So, with this, I stop here. Thank you.