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Sociocultural and Social Cognitive Theories: Historical and Current Practices for Students with Emotional and Behavioural Disorder (EBD)

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Abstract: The achievements in the study of human social and cognitive learning development are not ascribed to a single individual or theorist. This paper will examine how the theories promoted by Vygotsky and Bandura promote the foundation for the use of high leverage practices with students who display challenging behaviors in the classroom. Specifically, examining the major theoretical concepts of their work has allowed educators and others to develop classroom and behavioral management strategies that are effective for students with Emotional and Behavioral Disorders (EBD). The two theoretical concepts of sociocultural development theory and social cognitive theory have both been shown to support educators who are working to improve the academic and behavioral outcomes of students with emotional and behavioral disorders. Both of these theories have been used to develop teaching skills to provide all students, including students with behavioral challenges, better opportunities in education as well as success in the general education classroom. Moreover, these theories can be utilized to create professional development for educators on classroom and behavioral management strategies.

Keywords: Sociocultural Theory - Social Cognitive Theory - Current Practices -Students with Emotional and Behavioral Disorder .

1 Introduction

The achievements in the study of human social and cognitive learning development are not ascribed to a single individual or theorist. However, it is reasonable to attribute substantial contributions to the evolution of how we study cognitive development to two individuals. The first of these was a native of Belarus named Lev Vygotsky who was born in the late 1800s. Vygotsky is known as the originator of sociocultural theory. The other is Canadian-born Albert Bandura, who developed the concept of social cognitive development. Much research on cognitive development and learning, in the United States and elsewhere in the world, have relied on their ideas (Bandura, 2006; Daniels, 2005). In particular, the work of these two theorists has impacted the way educators approach teaching students with behavioral challenges. Specifically, examining the major theoretical concepts of their work has allowed educators and others to develop classroom and behavioral management strategies that are effective for students with Emotional and Behavioral Disorders (EBD). This paper will examine how the theories promoted by Vygotsky and Bandura promote the foundation for the use of high leverage practices with students who display challenging behaviors in the classroom.

Lev Vygotsky

Psychologist Lev Semionovich Vygotsky, who is known as the "Mozart of Psychology," studied a variety of topics as a young man, but eventually became a pioneer in psychological theory. Vygotsky completed 270 articles, numerous lectures, and ten books in the areas of psychological theory and educational theory. Despite his prolific work, he was not very well- known outside of the Soviet Union during his short lifetime; he died at 37 years

old. However, his work was widely published, and he became well known more than 30 years after his death (Bodrova & Leong, 2015; Daniels, 2005).

Social Development Theory. Vygotsky's research focused on expanding his social development theory, which states that our social experiences and interactions affect our development, meaning that consciousness and cognition are the end products of socialization and social behavior (Vygotsky, 1980). Vygotsky's theory of social development is considered one of the foundational works of Social Constructivist Theory (SCT), which has three essential

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components: (a) social interaction, (b) the More Knowledgeable Other (MKO), and (c) the Zone of Proximal Development (ZPD) (Vygotsky, 1978).

Social Interaction. According to Vygotsky, social interaction has a significant role in cognitive development. As he said, "Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological)" (Vygotsky, 1978, p. 57). Vygotsky stated that cognition is developed through individual's experiences and interactions/reactions within the environment. He believed that each person has tools that allow them to take on different roles as they interact in the world (Chemeli, 2019). Each of these roles is developed as a result of interacting with the particular cultures and environments in which the individual exists.

More Knowledgeable Other. The second essential component of social constructivist theory refers to the effect of any person, any More Knowledgeable Other (MKO) in the child's life who has greater knowledge or understanding of a subject than the student and supports the student's development and learning in that subject. An MKO is typically an adult, such as a teacher; however, a student's peer, including younger children, can also serve as an MKO, if that person possesses the greater knowledge. Given the information accessible through technology in the student's environments from which they can obtain knowledge, even computers can be considered to be a More Knowledgeable Other (Litowitz, 1993).

Zone of Proximal Development. Vygotsky described the Zone of Proximal Development (ZPD) as, "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers" (Vygotsky, 1978, p. 86). For example, in the zone of proximal development, a student can accomplish a task or obtain learning with the assistance of an MKO, which the child could not achieve independently. The concept of Vygotsky's ZPD is particularly relevant in educational settings where specific decisions are made regarding children's experiences within the ZPD to encourage and advance their learning (Chaiklin, 2003). Educators can also use the ZPD to identify the significant areas in which a student already possesses the needed skills and those where a student needs guidance or an MKO to develop the skills necessary to be able to work independently. The concept of ZPD emphasizes that an effective way of developing student skill is to have students of differing abilities work together in cooperative learning exercises (Chaiklin, 2003).

The effective use of the Zone of Proximal Development is often misunderstood as educators tend to restrict the application to one-on-one situations or adult-only tutoring with students, rather than applying it to the full range of individuals that could support the student's development. For example, using the high leverage practice of play as a strategy is a practical application of ZPD, where the collaborative exercise of a game with peers can use scaffolding for skills development in ways that being instructed by an adult cannot (McLeskey et al., 2017). In such cases, the group acts collectively as an MKO even if the individuals that comprise the group do not differ in level of ability (Litowitz, 1993; Wass & Golding, 2014).

Abtahi et al., (2017) demonstrated how the elements of Vygotsky's theories (e.g., social interaction, MKO, and ZPD) can be used to show how the experiences and social interactions of individuals influence their learning. The Zone of Proximal Development (see Figure 1) presents how an individual learns a new behavior or concept. At the center is the individual and the learning/development the individual can achieve alone or that the individual already possesses. Next is the zone of proximal development, where the individual can learn a concept but only with assistance. Finally, there is the outermost ring, this is the area of development or learning the individual cannot yet access because the items/MKOs necessary to do so are not accessible.

It is important to recognize that the outermost area of the zone is not ordinarily permanently inaccessible to the individual. It is simply not immediately accessible to the individual alone or with the support currently available in the ZPD. Therefore, in education it is important to examine that outermost area to determine what is needed in the child's environment to support access to learning/development. Moreover, Vygotsky identified the ZPD as the most sensitive area in learning, meaning it is also the area that can be most influential in supporting a child's development and learning. This can be achieved through accommodation, new tools, different curriculum, exposure to MKOs in the form of different peers, or exposure to MKOs in the form of community professionals and the like. By introducing MKOs and other factors into the ZPD, where the learner requires support, direction, and guidance to develop skills or learning, the teacher supports not just the child's development in the ZPD, but also the eventuality that this learning or development will become the child's own, meaning the child will no longer need the support of others to access it.

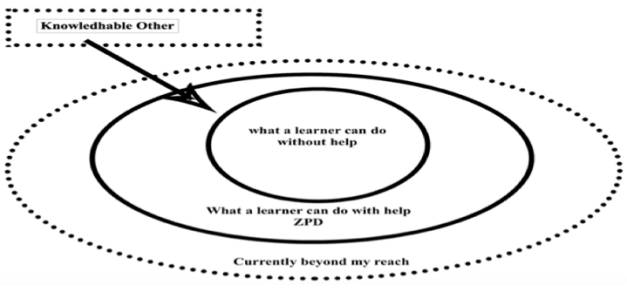

Fig. 1: Vygotsky's Zone of Proximal Development.

Applications of Vygotsky's Theory of Social Development

Traditional teaching methods rely on the idea that teachers transmit instruction to students. Under Vygotsky's theory, students assume a significant role in their own learning through the integration of collaborative exercises and reciprocal learning experiences that incorporate these concepts of the effects of social interaction on cognitive and problem-solving skills development (Crawford, 1996). Several educational methods rely on Vygotsky's ideas (Karpov & Haywood, 1998; Moll, 1990).

One important concept is the use of reciprocal teaching which is based in Vygotsky's ideas is that of scaffolding. The premise of reciprocal teaching is that the teacher first models how to use the strategy and then gradually gives the responsibility to the students to increase their comprehension of the text they are reading. The approach of reciprocal teaching is comprised of the four following components: summarize, question, clarify, and predict (Jennings, Caldwell & Lerner, 2014). Schunk (2012) noted that reciprocal teaching contains aspects of both social interaction and ZPD. The educational practice of peer collaboration is also based in Vygotsky's theories, specifically the idea of the Zone of Proximal Development (Griffin, 2001; Schunk, 2012). In this method, students work on tasks cooperatively to support learning in standard academic topics, including mathematics, science, and language arts.

Artisanship is another educational practice rooted in Vygotsky's ideas, where the educational institution partners with outside agencies, such as businesses or community organizations. This practice allows students to obtain real-world experience in a topic from an expert in the field who is not a teacher within the school. More information will be presented on these concepts later in the paper.

Albert Bandura

After Bandura graduated from high school, he enrolled at the University of British Columbia, majoring in biology; however, he became interested in psychology and eventually decided to pursue a degree in the field (Pajares, 2004). Bandura earned a doctorate in Clinical Psychology from the University of Iowa in 1952, was the president of the American Psychological Association in 1974; and, was recognized for his lifetime contributions to the field of psychology in 2004. Bandura is often referred to as the father of cognitive theory (Bandura, 2006).

Social Learning Theory

Social Learning Theory was originally introduced in the sixties and seventies and was more fully presented in 1977. It is a way of describing how children learn from one another and others through observation, imitation, and modeling. Social learning theory is the basis for high-leverage practices (McLeskey et al., 2017; Nabi & Prestin, 2017) for educators to use to support positive and constructive behavior in the classroom (Crain, 2015; Muro & Jeffrey, 2008). The basis of this theory is that individuals learn from others during normal daily social interactions. As children mimic the desired behaviors of peers and others in their environment (social imitation), educators and other adults in the children's lives can support these desirable behaviors through positive reinforcement (Akers & Jennings, 2019; Bandura, 1977).

Bandura's social learning theory is considered one of the most influential of the theories for understanding how human learning and behavior develop. Bandura sees social learning theory as one that connects theories on behavior and learning, because it takes into account the interaction between cognitive, behavioral, and environmental influences on human attention, memory, and motivation (Agarkar & Brock, 2017). Subsequently, social learning theory evolved into Social Cognitive Theory (SCT), in the mid-eighties. These theories shifted the focus from social learning – which occurs through observation, imitation, and modeling -- toward a model that observes the impact of the continuous reciprocal interaction between cognitive, behavioral, and environmental influences that affect an individual (child) through observation, understanding, predicting, and changing human behavior (Bandura, 1989).

The essential component of social learning theory is that it occurs during the process of the child's normal life, during interactions with and observations of, peers and adults. In this theory, learning occurs through: (a) observation, (b) imitation, and (c) modeling (Bandura & Walters, 1977). However, Bandura (2006) recognized that sometimes learning occurs without any change in behavior or development of new behavior.

Development of Behavior and Modeling

In social learning theory, the word "models" refers to those individuals that the child observes; whereas, the learning process the child engages in is called "modeling" (Newman & Newman, 2007). After a student observes a behavior, the second and third steps - imitating and modeling - can occur. Not only is the observation of positive behavior effective in driving a behavior change in a student with challenges, but children can also observe undesirable behaviors and subsequently begin modeling the negative behaviors. Therefore, it is essential to recognize that that the modeling choices and those who are models in the students' of those behavior for students have great impact on the student's behaviors. Examples of such behavior modeling in everyday life would be: (a) parents reading themselves or reading to their children; (b) a teacher demonstrating a mathematics problem; and, (c) a person reacting bravely or reacting fearfully in a given situation; and/or (d) another student who has the skills to be a model for a student to observe and imitate the displayed behavior (Bandura, 2006).

A key aspect of Bandura's ideas is that of reciprocal determinism. This theory involves the idea that an individual's behavior is influencing the personal factors and is influenced by the social environment (Bandura, 1978; Williams & Williams, 2010). The component of the individual here is comprised of cognitive factors such as: planning, judgement, emotions and motivations. In this theory, Bandura asserts that behavior actually affects

behavior and that personality is the connection between behavior, the environment, and the individual.

Observational Learning

According to Bandura, learning involves three factors: observational learning, reinforcement, and modeling. In 1961, Bandura initially examined observational learning through the Bobo Doll Experiment. The Bobo Doll Experiment study was designed to investigate how behaviors are imitated or learned from observing the actions of another individual. The study involved 36 boys and 36 girls aged three to six in a nursery school. After first assessing the children to establish a baseline of their existing aggression, they were divided into three groups: (a) group observes an aggressive model – an adult being violent toward the Bobo doll; (b) group observes a non-aggressive model – an adult who ignores the Bobo doll and interacts with other toys in non-aggressive way; (c) group observes no model (control). There were further conditions involving the gender of the children and the gender of the model. The second step after the observation was that all the subjects were exposed to an experience designed to create mildly aggressive feelings. The general finding of the study was that the children in the first group, the ones who had observed the adult modeling aggressive behavior, were more likely to exhibit aggression themselves – either physically or verbally. This demonstrated the power of the essential components of observational learning: attention, retention, reciprocation, and motivation. From this, Bandura noted that children learn and imitate behaviors they observe others doing, particularly when the process includes a live model demonstrating or acting out a behavior or task, a verbal instructional component with descriptions and explanations of the observed behavior, and a symbolic model**,** which involves real or fictional characters displaying the behavior. The symbolic model may also be found in books, film, television, or online media. This study resulted in a move in modern psychology away from behaviorism to theories that focused more on the cognitive (Newman & Newman, 2007).

Extrinsic and Intrinsic Reinforcement

Bandura asserted that the mental state of the individual is integral to learning development. Intrinsic reinforcements are the internal feelings people experience, including pride, satisfaction, and a sense of accomplishment. Conversely, external factors, or reinforcements, from the environment around a person also impact behavior and can also be used as a tool to support the development of desired behavior (Akin-Little et al., 2004). Examples of the external factors could be extrinsic reinforcements such as where an individual is involved in a game and desires to win, so that each time they gain a level or an amount of points, they are reinforced to continue playing. Other examples may be less obvious when they are intrinsically reinforced; such as when a child is cleaning his room to avoid being reprimanded by their parent or when a student will exert extra effort to study in order to earn a good grade**.**

Table 1: Types of Reinforcement With Examples.

Extrinsic Reinforcement	Intrinsic Reinforcement
Praise, fame, or money – are used as motivation for specific activities.	praise and nonverbal communication (e.g., smile, motivation for specific nod, thumbs up) social attention (e.g., a conversation, special time with the teacher or a peer) tangibles such as stickers, new pencils or washable tattoos

2 Modeling

Bandura identified the third component of learning as modeling. It is comprised of four conditions that the individual must cognitively process. The processing components are: attention, retention, reproduction, and motivation.

Attention. The impact of the example or model is affected by whether the example/model can attract and maintain the attention of the child. Moreover, it is important when working to address challenging behaviors, that the demonstrated behavior is desirable. Regardless of the positive or negative nature of the behavior, if it is one that garners attention from others, it is more likely to be attended to by the student.

Retention. This component involves whether a person retains, or is affected by, the behavior that was initially presented and focused on. In other words, people learn through internalizing information in memory. Based on the impact of the initial event, they are able to access the information they obtained from the situation and determine when it is appropriate to engage in the behavior themselves. Retention is impacted by the desirability of the outcome the individual saw the model experience when the behavior was first observed.

Reproduction. The critical factor is whether, after observation occurs and retention is engaged, the individual can – and chooses to - reproduce or imitate the behavior or skill. An example of reproduction would be if a child, after observing the model of the behavior of raising one's hand and waiting to be called upon, reproduces the action.

Motivation. Whether the observer feels inclined to imitate what has been observed or not is dependent upon motivation (Nabavi, 2012). Motivation can be influenced by multiple factors such as: past experience; promised or imagined incentives; and, vicarious experience, such as seeing and recalling how the model was reinforced for doing the behavior and desiring that same reinforcement (Muro & Jeffrey 2008; Skogster, 2008).

Social Cognitive Theory

Social cognitive theory (SCT) is the idea that learning is an interactive process that involves the individual, the individual's environment, and behavior. This theory of

Bandura's arose out of his social learning theory and was first introduced in 1986. By the mid-1980s, Bandura had begun to investigate the individual in the context of social learning by being more comprehensive in his research. Through this process, he expanded and transformed social learning theory to develop social cognitive theory to encompass the idea that a person learns from observing what others do and that the observation impacts a person's cognitive development (Bandura, 1999; Stokes, 1986). By observing what others are doing, the individual is able to better understand the observed behavior. This theory also examines the factors that impact how one's social experiences inform cognition (Green & Peil, 2009; Stajkovic & Luthans, 1998). The primary aspects of social cognitive theory are: observational learning, reinforcement, self-control, self-regulation, and self-efficacy (Zimmerman & Schunk, 2001).

Observational learning occurs through the modeling of observed behaviors. To begin, the child observes a model engage in effective behavior. Subsequently, the child engages in modeling the behavior as well, in order to also be considered approved of, effective, and successful. The next step involves reinforcement, which has two types (Burch, 2018; Bethards, 2014). Intrinsic reinforcements are the internal feelings people experience, including pride, satisfaction, and a sense of accomplishment. Similarly, extrinsic reinforcements, or external factors, from the environment around a person also impact behavior and can also be used as a tool to support the development of desired behavior. An example would be when a teacher gives approval (external reinforcement) for behavior in class, and then the student has a feeling of pride (internal reinforcement) for having achieved success and received praise for doing so.

The next key concept is self-regulation. As children develop, they begin to learn self- control and are able to make their own decisions about engaging in appropriate behaviors regardless of whether they are receiving external reinforcement. Once an individual has begun to consistently engage in self-control, even when encountering a new setting or type of event, this is considered self-regulation. In self-regulation, the process becomes more about goal-setting and decision-making that is based on an understanding or expectation regarding consequences. These qualities arise from the individual, meaning the individual child makes independent decisions regarding what is suitable or what is not suitable behavior, based on having passed through the previous stages (T. Williams & Williams, 2010).

Self-regulation is considered to be a significant factor in Bandura's theories and refers to the ability to direct one's own actions (Bandura, 1989). This aspect of the theory is generally considered to have three aspects, which are described by Bandura (1991) as: "self-monitoring of one's behavior, its determinants, and its effects; judgment of one's behavior in relation to personal standards and environmental circumstances; and affective self-reaction" (Bandura, 1991). This means that self-regulation is demonstrated by (a) performance in the environment, (b) development of functional task strategies, (c) skillful implementation of those plans, and (d) monitoring the results (Locke & Latham, 1990). Bandura (1991) also stressed the critical role of self-regulation in self-efficacy, stating: "Self-regulation also encompasses the self-efficacy satisfaction, and a sense of accomplishment. Similarly, extrinsic reinforcements, or external factors, from the environment around a person also impact behavior and can also be used as a tool to support the development of desired behavior. An example would be when a teacher gives approval (external reinforcement) for behavior in class, and then the student has a feeling of pride (internal reinforcement) for having achieved success and received praise for doing so. mechanism, which plays a central role in the exercise of personal agency by its strong impact on thought, affect, motivation, and action (Bandura, 1989). Finally, the system of self-regulation also plays a significant role as defined by Bandura (1991) in "moral conduct although compared to the achievement domain, in the moral domain the evaluative standards are more stable, the judgmental factors more varied and complex, and the affective self-reactions more intense" (Bandura, 1991). Other researchers have expanded upon these concepts, describing how this refers to the individual's behavior, emotion, and thoughts as these have meaning over the long-term. With self-regulation comes the ability to manage behavior and control disruptive emotions and impulses: Thinking before acting (Kolbenschlag, & Wunderlich, 2019; Cuncic, 2017; Pajares, 2002; Bandura, 1997).

The ultimate goal is to achieve self-efficacy, meaning an understanding of one's own level of ability and potential. Bandura (1994) defined self-efficacy as, "People's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave" (p. 2). This concept also refers to how individuals tend to engage in activities based on their sense of competence that is often based on past success (Mark, Donaldson, & Campbell, 2011; Hayden, 2009; Betz, 2007). Self-efficacy is key to the child's development because it is what drives motivation, perseverance, and even optimism about one's potential. In a sense, this trait can be seen as more important than actual mastery of a skill or behavior, because possessing self-efficacy means the individual has the confidence to attempt to master a skill, whereas without that feeling that one could potentially be successful, one might avoid even trying at all (Devi, Khandelwal, & Das, 2017).

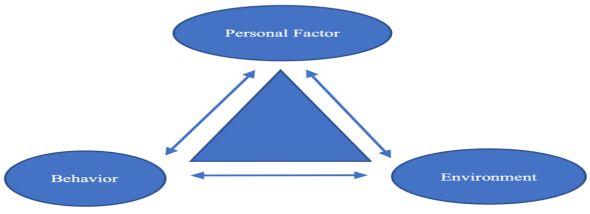

Fig.2: Reciprocal Determinism
Note. Bandura (1978)

Another key concept of social cognitive theory is reciprocal determinism, which as previously discussed is Bandura's idea that the individual's behavior isn't simply influenced by individual characteristics and the environment but that the reverse is also true, that these two things are influenced by the individual's behavior, as well. This is termed a triadic interaction and the components are: behavior, environment, and the individual. A real-world example of this phenomenon would be the situation involving the person who is afraid to fly (individual characteristic), who upon boarding a plane (environment) becomes visibly nervous (behavior), whereupon all the other passengers on the plane who perhaps are not fearful flyers become nervous due to the effect of the original individual's behavior (UK Essays, 2016).

In learning appropriate behaviors in the classroom, this concept may work as follows. An individual child has attention deficit hyperactivity disorder. When the child is at home with family, this is a small environment with a very few other individuals and the child exhibits few behavioral issues. However, the child's classroom has 24 children in it (environment) and in that setting the child with ADHD (individual characteristic) tends to become more easily distracted and hyperactive (behavior). When this occurs, the teacher has to expend energy toward helping the child with ADHD focus and stay calm, meaning that the need to address the child's undesirable behavior reduces the amount of teacher attention available for the child's typical peers in the classroom. In this case, the child's individual characteristic of ADHD and resulting behavior has affected the environment of the classroom while simultaneously, the child's individual characteristic of ADHD has been affected by the environment causing the child to engage in undesirable behavior (Evanovich & Scott, 2020).

How ZPD and SCT Support Behavioral Change?

Many studies have confirmed the effective use of Bandura's observational learning model, which he established in 1961. Murphy, Hawkins, and Nabors (2019) noted that observational learning can be a vehicle by which a student can effectively acquire a new behavior. They supported that that compliance with classroom rules can be achieved through the use of modeling during the *Good Behavior Game,* which resulted in students with emotional and behavioral disorders (EBD) exhibiting an increase in rule-following behaviors as well as social interaction with peers. A residual finding was that it was beneficial for teachers to reinforce the students consistently for following the classroom rules. Students received direct instruction from the teacher regarding classroom rules in addition to observing peers model the compliance skills. During direct instruction, techniques such as identifying examples and non-examples of students following classrooms were provided followed by participation in roleplaying, feedback, and specific praise. After the students with EBD observed their peers for one week, they joined one of three teams in the classroom. When the team followed the classroom rules, their names were posted on the board and they earned a selected reward. This study demonstrated Bandura's (1961) observational learning as it included the three concepts of using a live model (classroom peers), delivery of verbal instruction for the skill (direct instruction), and the use of a symbolic model (the *Good Behavior Game*) and the reward earned by the model and desired by observer (Murphy, Hawkins, & Nabors, 2019).

Another recent study that demonstrated the effective use of Bandura's observational learning model was conducted by (Robinson-Ervin et al., 2016). In this study, first the teacher provided direct instruction on social skills with 12 students, half of whom were designated as typical and half who had emotional and behavioral disorders. After the face-to-face instruction was presented, all the students completed lessons using the Culturally Responsive Computer- Based Social Skills Program. The computer-based intervention was comprised of prerecorded social skills lessons, with videos of peers displaying the social skill of following the directions of adults. The computer program began with a pre-test consisting of a series of questions about the importance of following adult directions. After each student completed the self-paced computer lessons they participating in a post-test about the skills exhibited in the videos. The video peer models were used to support the students with EBD identify the steps necessary to perform the skills with mastery. Once all the students completed the computer lessons, they roleplayed the skill of following adult directions. They created their own scripts for the roleplaying and - while classmates performed their scripts - the other students observed and evaluated whether their peers were following the demonstrated steps. This study demonstrated Bandura's (1961) observational learning by having the students observe, model their peers, and imitate the social skills modelled. The added component of cognitive evaluation of the skills observed and the follow-up discussion of skill used was included to promote generalization of skill development to other environments. The findings of this study of students with emotional and behavioral disorders indicated a long-term increase in the ability of these students and their general education peers to follow adult directions.

Similarly, Zolkoski and Lewis (2019), explored how Bandura's observational learning could be utilized to decrease a student's disruptive behavior. The study involved a fifth-grade student with EBD being educated in the general education classroom. The intervention technique used was *Mindfulness Breathing*, which was used to help the student calm down when agitated and manage his aggressive behavior. To implement the practice, the teacher asked all students to observe as the steps of Mindfulness Breathing were demonstrated. All the students then did the same steps that had been modelled. The steps were: (a) close your eyes, lie on your back, keep your legs flat, and put your arms to your side; (b) think of how you feel when breathing in and out; and, focus on your breath and think about how it feels as you take it in; (c) notice how you feel when you start breathing out; (d) breathe in and breathe out; practice

breathing in and out three times; and, (e) when you are ready, open your eyes and sit up slowly. The teacher would then later prompt the student with EBD to recall and do the steps, when he was agitated so as to manage his behaviors. As a result of this observational learning model, the student with emotional and behavioral disorders demonstrated a 50% decrease in aggressive behavior (Zolkoski & Lewis, 2019).

This study also examined the use of the technique *Thought Watching* (Zolkoski & Lewis, 2019). To implement this practice, the teacher asked all the students to observe and model the teacher doing the *Thought Watching* steps. Once the students' attention was focused, the teacher also verbalized each step as she demonstrated them. The steps consisted of: (a) begin by sitting or lying in a comfortable position; (b) sit quietly and focus on the rhythm of your breathing; (c) watch as your thoughts change (e.g., this was explained as visualizing the process as if one is standing in the hallway, watching people go by); (d) try to concentrate on watching what is happening in the moment; (f) once you have been able to stay with your thoughts in the moment, return your attention to your breathing; and, (g) stay in position and keep watching your thoughts moving until you hear me say to stop.

Additional components of observing, modeling and imitating the teacher in the *Thought Watching* steps were used to support the student with EBD in regulating his anxiety. As indicated by Bandura's social learning theory, learning by observation is accomplished through the combination of four separate processes. The first is to gain the student's attention for what is going to be observed by the model. Second, it is necessary to increase retention by having the student listen to the steps while they are also observing the model; and, third, provide the student with the opportunity to reproduce the skill modeled. Four, in this way the student with EBD was motivated to demonstrate the ability to manage his anger and to display necessary social skills.

Bandura first identified self-efficacy as the belief of individuals regarding their ability and how that belief or understanding impacts the degree of their ability to perform, achieve, or learn, as a key aspect of his theory of social learning in 1986 (Schunk, 2012). Kurnia, Degeng and Soetjipto (2017) employed the use of Find Someone Who (FSW) to improve self-efficacy and social skills using Bandura's concept. They set up their study by having a group of students participate in an activity for enhancing communication. The students were divided into groups of four heterogenous skill set students; mixed in one class, and asked to raise hand and find a partner who is not in their group. Then one student in each group was required to ask a question from a worksheet they were provided and then to record the respondent's answer. The respondent was required to check and evaluate the answer, and then take a turn at answering the same question. After all students had completed the activity, they were directed to find a new partner and repeat the activity until all questions on the worksheet had been answered. When the activity was completed all students returned to their seat. As a result of the activity, the researchers found that the students with disabilities demonstrated improved efficacy in continuing to communicate under difficult circumstances and improved long-term confidence.

Bandura proposed Social Cognitive Theory (SCT, 1986) as the means through which people manage the self-regulation of their thoughts, emotions, motivations, and actions. Researchers, besides Bandura have found that it is possible to teach self-regulation skills through roleplay strategies that involve setting goals that allow students to improve behavior by learning to manage their thoughts, reactions, and become self-directed. Smith et al., (2015) found that supporting the teaching of self-regulation skills helps student with emotional behavioral disorders learn how to set behavioral goals. During the first two weeks of their study, the students received goal-setting instruction from their teacher. They used a goal-setting graphic organizer while working in a group with their typical general education peers. The graphic organizer was provided to the students to track progress. Next, the teacher had the students roleplay. Through observing, modeling, and imitating the target behaviors for achieving the behavioral goals as a group, the student with EBD became self-regulated and able to define and set a goal to achieve a good grade; this exercise supported Bandura's theory on how people can learn to control their own thought processes (Smith, Cumming, Merrill, Pitts, & Daunic, 2015).

Modeling target behaviors is another strategy that confirms Bandura's ideas on self- regulation as supported by Smith et al. (2015), who also examined how learning to identify triggers and the physiological feelings related to an emotion, such as anger, can help students understand how to predict they are becoming angry and use that prediction to self-regulate. Over the course of two weeks, all the students received instruction on how to identify triggers and the bodily feelings related to becoming angry. The teacher used a role-play activity and peer model to deliver the lesson by having one student act out an emotion and then having the student with EBD try control strategies. After the activity, the student showed control of his anger by using counting, distraction, and positive thoughts.

According to Vygotsky's (1978) social interaction model, social skills can be supported through planned social interaction with an adult mediator. Behavior Bingo is another intervention that relies on the social interaction model; it is a positive reinforcement intervention created by Collins et al. (2018) that a teacher may use to develop positive and constructive classroom behavior that was designed to prevent disruptive and off-task behaviors. Collins et al. (2018) created Behavior Bingo as a group contingency intervention to manage classroom behavior of students with emotional behavioral disorders. The intervention involved a modified Bingo board, a Bingo card for each student, the announcement of the goals and rules, a container filled with paper slips, and a list of behavior bingo rewards. For the intervention, the students were divided into groups, the first group that earned "Bingo" would then be able to access a reward. Behavior Bingo also provided the

students with EBD the opportunity to interact with their peers for the first time. Students demonstrated a decrease in disruptive behavior and an increase in on-task behavior following the intervention.

Another aspect of Vygotsky's social interaction model is the role of the adult mediator, who Vygotsky defined as an active member in the child's life. Anderson, Trinh, Caldarella, Hansen, and Richardson (2018) proposed the use of social skills instruction to increase the positive social interaction skills of three kindergarten students who exhibited social and behavioral challenges on the playground. An adult was assigned by the authors to be present with the students to provide direct instruction on the playground based on social lessons. Specifically, the students with EBD were given direct instruction on social skills by the adult, in practices such as: "how to introduce yourself;" "how to talk to others;" "how to ask to play with others;" and, "how to play appropriately with others." Students were directed in how to interact with each other by themselves and by the adult, which developed their social skills. Students demonstrated significant improvement following the implementation of the intervention in the area of increased positive social interaction.

Vygotsky's concept of Zone of Proximal Development (ZPD) has also been examined by different researchers in the 21st century. Gani et al. (2017) examined how introducing the MKO into the zone of proximal development can help develop an individual's capability. In Watts, Bryant, and Roberts (2019), the use of peer and cross-age tutors with emotional and behavioral disorders (MKOs) was employed to improve the behaviors of other students with emotional behavioral disorders. To begin, the investigators took on the role of the MKO while they trained the older students how to be tutors. The training procedures included modeling, providing practice opportunities, teaching corrective feedback procedures, and how to present positive behavioral reinforcement techniques. The investigators observed the older students with EBD using momentary time-sampling procedures and rotated tutors every 30 seconds. Then, the student tutors were directed by the investigators in how to use instructional techniques (e.g., how to start games and keep their tutee on-task) and how to greet their younger tutees. They also instructed them in how to review the previous session (e.g., what was successful, what needs improvement), start the game, and keep their tutee on task. The study resulted in positive behavioral outcomes, such as an increase in academic skill, increased time on-task, and improved classroom behavior.

Vygotsky's ZPD is the area that encompasses what an individual can accomplish with help. Alqahtani and Murry (2015) supported the use of the zone of proximal development model through the Peer Buddy Program, to help students with EBD improve their social skills so they could be included and more successful in the general education classroom. Alqahtani and Murry (2015) asserted that matching students without EBD to peers with EBD in the general education setting supported students. They had all students (i.e., peer buddies and students with EBD) were scheduled in the same general education courses, in order to have the same assignments. The peer buddies then worked with the students with EBD in the special education class where the pair could receive more support when needed. The study involved ZPD as the students with EBD could work on their own when possible and then be supported by their peer buddies when a challenge arose. This study confirmed that the Peer Buddy Program had a positive impact on students with EBD for increasing social skills as well as academic skills.

3 Conclusions

The two theoretical concepts of sociocultural development theory and social cognitive theory have both been shown to support educators who are working to improve the academic and behavioral outcomes of students with emotional and behavioral disorders. For example, Vygotsky's theories focus on how development can be influenced by peers, and the wider society and culture in which the individual lives. Each of these areas play a significant role in the development of the individual's learning. Bandura examined how individuals develop learning through observing and modeling the behaviors, attitudes, and emotional reactions of others. This involves the interaction of environment, individual characteristics, and behavior.

Both of these theories have been used to develop teaching skills to provide all students, including students with behavioral challenges, better opportunities in education as well as success in the general education classroom. Moreover, these theories can be utilized to create professional development for educators on classroom and behavioral management strategies. In the United States, the 2004 reauthorization of the Individuals with Disabilities Education Act (IDEA) reformed special education services for students with disabilities, required that these students be educated in the least restrictive learning environment (LRE). The optimal LRE is the general education classroom, therefore, the goal is to create a setting in the classroom where the student with disabilities learns alongside typical peers with whatever accommodations are required to facilitate success. Employing methods based on the theories of Bandura and Vygotsky allows educators to create situations where children who engage in challenging behaviors are given the tools to develop positive and desirable behaviors, thereby facilitating their remaining in the general education classroom.

Strategies that rely on the concepts of the Zone of Proximal Development and social cognitive theory have been promoted as high leverage practices for use with students who engage in challenging behaviors in the classroom. Therefore, teachers are encouraged to implement evidence-based practices that incorporate these ideas. Prior to implementing a strategy for a particular student, teachers should consider increasing observation of the student during the class. Similarly, it is suggested that creating a

manageable task for all students, and providing differentiated instruction, is very useful to establishing a setting where each student can access the learning. These theories also encourage introducing choices in learning, and situations where students can choose how they access a subject independently. Furthermore, teachers should monitor the student to determine what might be needed in the ZPD that would allow them to access learning in areas where they are struggling to learn independently, including introducing MKOs – either the teachers themselves or peers with more knowledge. Sessions where positive and productive behaviors are modeled will also help support students with behavioral challenges. Seeing peers receive positive reinforcement for such behaviors may also influence students with behavioral issues, as well receiving positive reinforcement for engaging in such behaviors themselves. Finally, supporting these students in acquiring greater self-confidence and self-esteem allows these students to understand that not only do others not view them as "bad" or "incapable," but also to internalize the idea that they can be accomplished and "good." These internalized feelings support the development of qualities such as self-control, self-regulation, and self-efficacy – all of which allow these students to achieve positive improvement and outcomes in not just the behavioral area but also the academic sphere.

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Conflict of interest

The authors declare that there is no conflict regarding the publication of this paper.

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