“Special Topics in Educational Psychology”.

In Section 1 of this course you will cover these topics:
' Classroom Management And Evidence-Based Practice
' The Good Behavior Board Game
' Behavioral Contracting

**Topic : Classroom Management And Evidence-Based Practice**

**Topic Objective:**

At the end of this topic student would be able to:

- Explain Classroom management
- Explain Corporal punishment
- Explain Rote Discipline
- Explain Discipline with Dignity
- Explain Evidence-based practice
- Explain Best practices v. intuition
- Explain Research based evidence
- Explain Psychology
- Explain Levels of evidence and evaluation of research
- Explain Meta-analyses and systematic research syntheses
- Explain Social Policy

**Definition/Overview:**

**Classroom management:** Classroom management is a term used by teachers to describe the process of ensuring that classroom lessons run smoothly despite disruptive behavior by students. The term also implies the prevention of disruptive behavior. It is possibly the most difficult aspect of teaching for many teachers and indeed experiencing problems in this area causes some to leave teaching altogether. In 1981 the US National Educational Association reported that 36% of teachers said they would probably not go into teaching if they had to decide again. A major reason was "negative student attitudes and discipline".

**Evidence-based practice:** The terms "evidence-based treatment" and "evidence-based practice" are often confused. While evidence-based treatments (EBTs) are interventions
which have been proven effective through rigorous research methodologies, evidence-based practice (EBP) refers to a decision-making process which integrates the best available research, clinician expertise, and client characteristics. EBP is an approach to treatment rather than a specific treatment. In medicine, it is used to make clinical decisions for individual patients. EBP promotes the collection, interpretation, and integration of valid, important and applicable patient-reported, clinician-observed, and research-derived evidence. The best available evidence, moderated by patient circumstances and preferences, is applied to improve the quality of clinical judgments and facilitate cost-effective care.

Key Points:

1. Classroom management

Classroom management is closely linked to issues of motivation, discipline and respect. Methodologies remain a matter of passionate debate amongst teachers; approaches vary depending on the beliefs a teacher holds regarding educational psychology. A large part of traditional classroom management involves behavior modification, although many teachers see using behavioral approaches alone as overly simplistic. Many teachers establish rules and procedures at the beginning of the school year. They also try to be consistent in enforcing these rules and procedures. Many would also argue for positive consequences when rules are followed and negative consequences when rules are broken. There are newer perspectives on classroom management that attempt to be holistic. One example is affirmation teaching, which attempts to guide students toward success by helping them see how their effort pays off in the classroom. It relies upon creating an environment where students are successful as a result of their own efforts

2. Corporal punishment

Until recently, Corporal punishment was widely used as a means of controlling disruptive behavior but it is now no longer fashionable, though it is still advocated in some contexts by people such as James Dobson.
3. Rote Discipline

Also known as `lines`, Rote Discipline is a negative sanction used for behavior management. It involves assigning a disorderly student sentences or the classroom rules to write repeatedly. Among the many types of classroom management approaches, it is very commonly used.

4. Discipline with Dignity

According to its founders, Discipline with Dignity is one of the most widely practiced behavior management philosophies in the world. Founded by Dr. Richard Curwin and Dr. Allen Mendler, the program is utilized in more than 12 different countries. Discipline with Dignity provides an in-depth flexible approach for effective school and classroom management. With a strong focus on developing responsibility, it is a comprehensive, practical program that leads to improved student behavior through responsible thinking, cooperation, mutual respect, and shared decision-making.

Tools for Teaching is a classroom management method created and taught by Fred Jones on speaking tours and in the eponymous book series.

Positive Classrooms developed by Dr. Robert DiGiulio sees positive classroom management as the result of four factors: how teachers regard their students (spiritual dimension), how they set up the classroom environment (physical dimension), how skillfully they teach content (instructional dimension), and how well they address student behavior (managerial dimension). Sometimes

Assertive discipline is another systematic approach of classroom management. Lee and Marlen Canter discuss the ideas behind this approach in several published books.

5. Evidence-based practice

The term evidence-based treatment (EBT) or empirically-supported treatment (EST) refers to preferential use of mental and behavioral health interventions for which systematic empirical research has provided evidence of statistically significant effectiveness as treatments for specific problems. In recent years, EBP has been stressed by professional organizations such as the American Psychological Association and the American Occupational Therapy Association, which have also strongly encouraged their members to carry out investigations.
to provide evidence supporting or rejecting the use of specific interventions. Pressure toward EBT has also come from public and private health insurance providers, which have sometimes refused coverage of practices lacking in systematic evidence of usefulness.

Many areas of professional practice, such as medicine, psychology, psychiatry and so forth, have had periods in their pasts where practice was based on loose bodies of knowledge. Some of the knowledge was simply lore that drew upon the experiences of generations of practitioners, and much of it had no truly scientific evidence on which to justify various practices.

In the past this has often left the door open to quackery perpetrated by individuals who had no training at all in the domain, but who wished to convey the impression that they did for profit or other motives. As the scientific method became increasingly recognized as the means to provide sound validation for such methods, it became clear that there needed to be a way of excluding quack practitioners not only as a way of preserving the integrity of the field (particularly medicine), but also of protecting the public from the dangers of their "cures." Furthermore, even where overt quackery was not present, it was recognized that there was a value in identifying what actually does work so it could be improved and promoted.

Evidence based treatment is an approach which tries to specify the way in which professionals or other decision-makers should make decisions by identifying such evidence that there may be for a practice, and rating it according to how scientifically sound it may be. Its goal is to eliminate unsound or excessively risky practices in favor of those that have better outcomes.

EBT uses various methods (e.g. carefully summarizing research, putting out accessible research summaries, educating professionals in how to understand and apply research findings) to encourage, and in some instances to force, professionals and other decision-makers to pay more attention to evidence that can inform their decision-making. Where EBT is applied, it encourages professionals to use the best evidence possible, i.e. the most appropriate information available.
6. Best practices v. intuition

Evidence-based practice (EBP) involves complex and conscientious decision-making which is based not only on the available evidence but also on patient characteristics, situations, and preferences. It recognizes that care is individualized and ever changing and involves uncertainties and probabilities.

EBP develops individualized guidelines of best practices to inform the improvement of whatever professional task is at hand. Evidence-based practice is a philosophical approach that is in opposition to rules of thumb, folklore, and tradition. Examples of a reliance on "the way it was always done" can be found in almost every profession, even when those practices are contradicted by new and better information.

However, in spite of the enthusiasm for EBP evinced over the last decade or two, some authors have redefined EBP in ways that contradict, or at least add other factors to, the original emphasis on empirical research foundations. For example, EBP may be defined as treatment choices based not only on outcome research but also on practice wisdom (the experience of the clinician) and on family values (the preferences and assumptions of a client and his or her family or subculture).

Research oriented scientists, as opposed to authors, test whether particular practices work better for different subcultures or personality types, rather than just accept received wisdom. For example, the MATCH Study run at many sites around the US by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) tested whether particular types of clients with alcohol dependence would benefit differentially from three different treatment approaches to which they were randomly assigned. The idea was not to test the approaches but the matching of clients to treatments, and though this missed the question of client choice, it did demonstrate a lack of difference between the different approaches regardless of most client characteristics, with the exception that clients with high anger scores did better with the non-confrontational Motivational Enhancement approach which has been demonstrated superior in a meta-analysis of alcohol treatment outcome research and only required four as opposed to twelve session within Project MATCH.

The theories of evidence based practice are becoming more commonplace in nursing care. Nurses who are baccalaureate prepared are expected to seek out and collaborate with other
types of nurses to demonstrate the positives of a practice that is based on evidence. Looking at a few types of articles to examine how this type of practice has influenced the standard of care is important but rarely internally valid. None of the articles specify what their biases are. Evidence-based practice has gotten its reputation by examining the reasons why any and all procedures, treatments, and medicines are given. This is important for refining practice so the goal of assuring patient safety is met.

**7. Research based evidence**

Evidence-based design and development decisions are made after reviewing information from repeated rigorous data gathering instead of relying on rules, single observations, or custom. Evidence-based medicine and evidence-based nursing practice are the two largest fields employing this approach. In psychiatry and community mental health, evidence-based practice guides have been created by such organizations as the Substance Abuse and Mental Health Services Administration and the Robert Wood Johnson Foundation, in conjunction with the National Alliance on Mental Illness. Evidence-based practice has now spread into a diverse range of areas outside of health where the same principles are known by names such as results-focused policy, managing for outcomes, evidence-informed practice etc.

This model of care has been studied for 30 years in universities and is gradually making its way into the public sector. It effectively moves away from the old medical model (You have a disease, take this pill.) to a evidence presented model using the patient as the starting point in diagnosis. EBPs are being employed in the fields of health care, juvenile justice, mental health and social services among others. The theories of evidence based practice are becoming more commonplace in the nursing care. Nurses who are baccalaureate prepared are expected to seek out and collaborate with other types of nurses to demonstrate the positives of a practice that is based on evidence.

Key elements in using the best evidence to guide the practice of any professional include the development of questions using research-based evidence, the level and types of evidence to be used, and the assessment of effectiveness after completing the task or effort. One obvious problem with EBP in any field is the use of poor quality, contradictory, or incomplete evidence. Evidence-based practice continues to be a developing body of work for professions as diverse as education, psychology, economics, nursing, social work and architecture.
8. Psychology

According to Norcross et al. "the burgeoning evidence based practice movement in mental health attempts to identity, implement, and disseminate treatments that have been proven demonstrably effective according to the empirical evidence". However, Norcross et al. also state that perhaps it is more useful to identify what does not work. They conducted survey rating experts opinions of "not at all discredited" to "certainly discredited" for a range of treatments. Examples of the range of discredited psychotherapies includes: angel therapy, the use of pyramid structures, orgone therapy, past lives therapy, chiropractic manipulation, neurolinguistic programming and Erhard Seminars Training. The limitation to the study was that some subjects may not have been discredited even though there was no evidence for efficacy. It was recommended that future polls take this into consideration, though the researchers concluded that the study does identify the dark side or "quack factor" of modern mental health practice.

9. Levels of evidence and evaluation of research

Because conclusions about research results are made in a probabilistic manner, it is impossible to work with two simple categories of outcome research reports. Research evidence does not fall simply into "evidence-based" and "non-evidence-based" classes, but can be anywhere on a continuum from one to the other, depending on factors such as the way the study was designed and carried out. The existence of this continuum makes it necessary to think in terms of "levels of evidence", or categories of stronger or weaker evidence that a treatment is effective. To classify a research report as strong or weak evidence for a treatment, it is necessary to evaluate the quality of the research as well as the reported outcome.

Evaluation of research quality can be a difficult task requiring meticulous reading of research reports and background information. It may not be appropriate simply to accept the conclusion reported by the researchers; for example, in one investigation of outcome studies, 70% were found to have stated conclusions unjustified by their research design.

Although early consideration of EBP issues by psychologists provided a stringent but simple definition of EBP, requiring two independent randomized controlled trials supporting the effectiveness of a treatment, it became clear that additional factors needed to be considered.
These included both the need for lower but still useful levels of evidence, and the need to require even the "gold standard" randomized trials to meet further criteria.

A number of protocols for the evaluation of research reports have been suggested and will be summarized here. Some of these divide research evidence dichotomously into EBP and non-EBP categories, while others employ multiple levels of evidence. As the reader will see, although the criteria used by the various protocols overlap to some extent, they do not do so completely.

The Kaufman Best Practices Project approach did not use an EBP category per se, but instead provided a protocol for selecting the most acceptable treatment from a group of interventions intended to treat the same problems. To be designated as "best practice", a treatment would need to have a sound theoretical base, general acceptance in clinical practice, and considerable anecdotal or clinical literature. This protocol also requires absence of evidence of harm, at least one randomized controlled study, descriptive publications, a reasonable amount of necessary training, and the possibility of being used in common settings. Missing from this protocol are the possibility of nonrandomized designs (in which clients or practitioners decide whether an individual will receive a certain treatment), the need to specify the type of comparison group used, the existence of confounding variables, the reliability or validity of outcome measures, the type of statistical analysis required, or a number of other factors required by some evaluation protocols.

A protocol suggested by Saunders et al. assigns research reports to six categories, on the basis of research design, theoretical background, evidence of possible harm, and general acceptance. To be classified under this protocol, there must be descriptive publications, including a manual or similar description of the intervention. This protocol does not consider the nature of any comparison group, the effect of confounding variables, the nature of the statistical analysis, or a number of other criteria. Interventions are assessed as belonging to Category 1, well-supported, efficacious treatments, if there are two or more randomized controlled outcome studies comparing the target treatment to an appropriate alternative treatment and showing a significant advantage to the target treatment. Interventions are assigned to Category 2, supported and probably efficacious treatment, based on positive outcomes of nonrandomized designs with some form of control, which may involve a non-treatment group. Category 3, supported and acceptable treatment, includes interventions supported by one controlled or uncontrolled study, or by a series of single-subject studies, or...
by work with a different population than the one of interest. Category 4, promising and acceptable treatment, includes interventions that have no support except general acceptance and clinical anecdotal literature; however, any evidence of possible harm excludes treatments from this category. Category 5, innovative and novel treatment, includes interventions that are not thought to be harmful, but are not widely used or discussed in the literature. Category 6, concerning treatment, is the classification for treatments that have the possibility of doing harm, as well as having unknown or inappropriate theoretical foundations.

A protocol for evaluation of research quality was suggested by a report from the Centre for Reviews and Dissemination, prepared by Khan et al. and intended as a general method for assessing both medical and psychosocial interventions. While strongly encouraging the use of randomized designs, this protocol noted that such designs were useful only if they met demanding criteria, such as true randomization and concealment of the assigned treatment group from the client and from others, including the individuals assessing the outcome. The Khan et al. protocol emphasized the need to make comparisons on the basis of "intention to treat" in order to avoid problems related to greater attrition in one group. The Khan et al. protocol also presented demanding criteria for nonrandomized studies, including matching of groups on potential confounding variables and adequate descriptions of groups and treatments at every stage, and concealment of treatment choice from persons assessing the outcomes. This protocol did not provide a classification of levels of evidence, but included or excluded treatments from classification as evidence-based depending on whether the research met the stated standards.

An assessment protocol has been developed by the U.S. National Registry of Evidence-Based Practices and Programs (NREPP). Evaluation under this protocol occurs only if an intervention has already had one or more positive outcomes, with a probability of less than 0.05, reported, if these have been published in a peer-reviewed journal or an evaluation report, and if documentation such as training materials has been made available. The NREPP evaluation, which assigns quality ratings from 1 to 4 to certain criteria, examines reliability and validity of outcome measures used in the research, evidence for intervention fidelity (predictable use of the treatment in the same way every time), levels of missing data and attrition, potential confounding variables, and the appropriateness of statistical handling, including sample size.
A protocol suggested by Mercer and Pignotti uses a taxonomy intended to classify on both research quality and other criteria. In this protocol, evidence-based interventions are those supported by work with randomized designs employing comparisons to established treatments, independent replications of results, blind evaluation of outcomes, and the existence of a manual. Evidence-supported interventions are those supported by nonrandomized designs, including within-subjects designs, and meeting the criteria for the previous category. Evidence-informed treatments involve case studies or interventions tested on populations other than the targeted group, without independent replications; a manual exists, and there is no evidence of harm or potential for harm. Belief-based interventions have no published research reports or reports based on composite cases; they may be based on religious or ideological principles or may claim a basis in accepted theory without an acceptable rationale; there may or may not be a manual, and there is no evidence of harm or potential for harm. Finally, the category of potentially harmful treatments includes interventions such that harmful mental or physical effects have been documented, or a manual or other source shows the potential for harm.

Protocols for evaluation of research quality are still in development. So far, the available protocols pay relatively little attention to whether outcome research is relevant to efficacy (the outcome of a treatment performed under ideal conditions) or to effectiveness (the outcome of the treatment performed under ordinary, expectable conditions).

10. Meta-analyses and systematic research syntheses

When there are many small or weak studies of an intervention, a statistical meta-analysis can be used to co-ordinate the studies' results and to draw a stronger conclusion about the outcome of the treatment. This can be an important contribution to the establishment of a foundation of evidence about an intervention.

In other situations, facts about a group of study outcomes may be gathered and discussed in the form of a systematic research synthesis (SRS). A SRS can be more or less useful, depending on the evaluation protocol chosen, and errors in choice or use of a protocol have led to fallacious reports. The meaningfulness of a SRS report on an intervention is limited by the quality of the research under consideration, but SRS reports can be helpful to readers seeking to understand EBP-related choices.
Miller et. al. provide an excellent example and explication of the use of meta-analysis examining treatment outcome research, incorporating the principles of rigorous empirical research from the strong end of the continuum of levels of evidence. This textbook also explicates how the research included was selected (e.g. controlled study looking at two different approaches, appearing in a peer reviewed journal, sufficient power to find significant differences if they occurred) and how each study was checked for validity (how was the outcome measured?) and reliability (did the research do what they said they did?), etc. to create a Cumulative Evidence Score weighted by the quality of the study (and not by the outcome) such that better studies with "stronger designs" and better methodological quality ratings carry more weight than weaker studies. The results lead to a rank ordering of the 48 treatment modalities included and provide a basis for selecting supportable treatment approaches beyond anecdotes, traditions and lore.

11. Social Policy

There are increasing demands for the whole range of social policy and other decisions and programs run by government and the NGO sector to be based on sound evidence as to their effectiveness. This has seen an increased emphasis on the use of a wide range of Evaluation approaches directed at obtaining evidence about social programs of all types. A research collaboration called the Campbell Collaboration has been set up in the social policy area to provide evidence for evidence-based social policy decision-making. This collaboration follows the approach pioneered by the Cochrane Collaboration in the health sciences. Using an evidence-based approach to social policy has a number of advantages because it has the potential to decrease the tendency to run programs which are socially acceptable (e.g. drug education in schools) but which often prove to be ineffective when evaluated.

**Topic : The Good Behavior Board Game**

**Topic Objective:**

At the end of this topic student would be able to:

- Explain Behavior Modification versus Psychoanalytic Psychotherapy
- Explain Principles of Behavior Modification
- Explain Effectiveness and Intrusiveness of Reinforcers
• Explain Defining Behavioral Problems and Goals

**Definition/Overview:**

**Good Behavior Board Game:** The underlying principles of the Good Behavior Game stem from studies that have been done in behavior theory and behavior observations over the past thirty years. Concepts such as positive reinforcement (rewards) and behavior modification have been in use as early as the 1920's. This overview of behavior management will introduce the reader to its basic theory and to procedures for increasing and maintaining "good" behavior.

**Key Points:**

**1. Behavior Modification versus Psychoanalytic Psychotherapy**

Early attempts at treating problem child behavior were mainly based on the psychoanalytic or disease model approach. Pioneers in this approach included Leighton Witmer, who believed that many social and academic problems resulted from physical defects or illnesses, and Sigmund Freud, who applied his psychoanalytic techniques to children's problems. The psychoanalytic and disease model approaches to child treatment have the following assumptions:

- Problem behaviors are symptoms of an underlying cause.
- Therapy should consist primarily of allowing the child to express his emotions.
- A good relationship is a prime requisite for successful therapy, and the relationship between the therapist and the child is seen as the critical element in bringing about change in the child's behavior.

Methods of therapy include letting the child play with dolls and toys in the therapist's office and interpreting the child's feelings and fantasies or the child's responses to Rorschach tests. The key is to get the child to release his emotions through catharsis or expression of feeling so that these causes of the problems behaviors can be excised.

Summative evaluations of the psychoanalytic approach have failed to show any significant influence of psychotherapy with children. Treated children were found to improve at nearly the same rate as children who were accepted for, but never began treatment. Although
behavior modification was introduced as early as 1913 by John B. Watson, the approach did not gain prominence until the 1950's with the work of B. F. Skinner.

Skinner re-conceptualizes behavior change by emphasizing the behavior itself rather than any inner condition that might explain it. In behavior modification an observable behavior is changed by the systematic application of techniques that are based on learning theory and experimental research. A behavior is observable in that it is measurable in terms of frequency, rate, intensity, duration, or pattern of behavior. Thus, a child's "mood" is not an observable behavior, but talking out of turn or throwing a temper tantrum is. The emphasis on making the behavior observable makes irrelevant any subconscious or inner condition which has been the emphasis of the psychoanalytic approach. Behavior modification differs from psychoanalysis not only in the focus of treatment (the behavior itself versus psychological causes), but also in the manner of treatment in that its treatment is systematic. If, as according to psychoanalytic approaches, the child's therapy depends on a good relationship between the child and the therapist, and if only the child's therapist can effect any behavioral change in the child, then any changes brought about by the therapist will be reduced or eliminated once contact with the therapist ends. The problem is avoided by making treatment explicit. In other words, instead of worrying about some intrapsychic conflict within the child, the behavior analyst concentrates on overt events that precede and follow the behavior in question. While unobservable factors may effect a person's behavior, the behavior analyst assumes that behavior is controlled by observable stimuli (antecedent events) and reinforcements (consequent events). This systematic and explicit approach to treatment allows various behavior analysts (such as teachers, parents, other therapists) to work with the child rather than one lone therapist who has worked with the child long enough to understand his inner psyche. Behavior techniques have repeatedly been used successfully in classroom setting to alter children behavior. Many of the principles of the approach were developed in laboratory settings. Thus, there is strong evidence from research that behavior techniques work.

2. Principles of Behavior Modification

2.1 "Good" and "Bad" Behavior

A basic tenet of behavior theory is that very few behaviors are universally labeled "good" or "bad." Classroom behaviors that might be considered good in one culture, community, or even school can be labeled in a different setting. For example, some
teachers encourage active discussion among students while others consider working quietly at the student's own desk as more appropriate behavior. The same teacher can even deem the same behavior as good or bad depending on the circumstances. The teacher, then, must define explicitly for the students the desired, or target behaviors. He cannot take for granted that the student knows exactly what proper behavior is for each situation. This is especially important in the early school years when what a child has learned as proper behavior at home may be vastly different from the behavior the teacher desires. Defining appropriate behavior should be the first step in any classroom behavior management program.

2.2 Observable Behavior

As stated earlier behavior modification deals only with behavior that is observable or measurable. When determining whether a person's behavior has changed, one cannot rely on one's own or someone else's subjective opinion on the matter. Instead, one must be able to cite some measurable difference in the behavior. One might cite, for example, that the frequency or rate or occurrence has decreased, or perhaps that the intensity of the behavior has changed. Behaviors as Problems Another principle of behavior modification is to treat behaviors as problems, not symptoms. While some childhood behavior problems (Down's Syndrome, for example) have physiological causes, in most classrooms they are not symptoms of any underlying medical disease. In addition, for the behavior analyst these problems do not stem from some underlying intrapsychic conflicts; instead, they are determined by other behaviors and events that precede and follow them, and they can be altered simply by addressing these other behaviors and events by providing stimuli that will bring on more desirable behaviors. One common concern with this view is that the method is "symptom substitution" - that if the underlying cause is not addressed, it will only manifest itself in another behavior problem. However, studies have shown that children treated in this manner showed no adverse side effects.

2.3 Conditioned and Unconditioned Reinforcers

In selecting appropriate positive reinforcers it is useful first to consider how stimuli become reinforcers. Some stimuli are "natural" or unconditioned reinforcers. Food for a hungry person and warmth for a cold person are examples of unconditioned
reinforcers. Conditioned reinforcers, on the other hand, are stimuli that were originally neutral, but through association with unconditioned or previously conditioned reinforcers, become reinforcers themselves. Money, for example, has no intrinsic reinforcing value, but if the subject has had frequent experiences of exchanging money for tangible goods such as toys or candies, then money assumes reinforcing properties. For very young children many conditioned reinforcers develop from being coupled with food such as the unconditioned reinforcer. Thus, the fact that a student has never experienced verbal praise while being fed might explain why he does not respond to such typical conditioned reinforcers as approval and good grades. Typical conditioned reinforcers, a common strategy is to find a reinforcer, whether conditioned or unconditioned, that is effective and to pair the conventional but ineffective reinforcer with the effective one. For example, a first grade teacher found that one of he' disruptive students did not respond to being praised on those occasions when he displayed desired behavior, but did respond to hugs and pats. By initially pairing verbal and hugs and pats frequently, and then gradually reducing the hugs and pats, the teacher began to maintain desired behavior with verbal praise alone. Pairing strategies such as this are useful when the effective reinforcer is impractical or will be impractical. For example, it was important to teach the first grade student to respond to praise because hugs and pats from the teacher would be inappropriate as the student gets older.

2.4 Positive Reinforcement

Generally, behavior change is brought about through reinforcement. When stimulus, such as an object or event, is presented as a consequence of a response, or measurable behavior, and the rate of that response increases or maintains as a result, the stimulus is called a positive reinforcer. Examples of positive reinforcers include praise, money, or an enjoyable activity. Selecting appropriate positive reinforcers is not a simple task. A teacher would be naive to think that one or a few reinforcers will work with all students in all situations. Fortunately, there is abundant research which has yielded a set of principles to help guide the teacher.
3. Effectiveness and Intrusiveness of Reinforcers

Matching reinforcers with individuals depends on two key factors: effectiveness and intrusiveness. We have already seen that some conventional reinforcers are not always effective with some students. Effectiveness judgements are based solely on objective observations. A reinforcer is effective only if it increases the rate of a desirable response or decreases the rate of an undesirable one. If the reinforcer is found to be ineffective, other stimuli will have to be tried. Effectiveness can be influenced by the subject's satiation with a particular reinforcer. If a child is overly praised, then praise would lose its reinforcing value. (Over praising is not a problem in most classroom settings, but it can be in tutoring situations)

Food, or a particular food, loses its effectiveness when the subject is full, or if he has had his fill with sweets, for example. Satiation can be avoided if the child is temporarily deprived of the reinforcer just before it is given. If a certain food is used as a reward, the child should not normally have easy access to that item.

To facilitate finding an effective reinforcer some behavior analysts have suggested that the children themselves be allowed to choose from a list of possibilities. However even if this approach is used, the teacher must still monitor the effectiveness of a reinforcer since people do not necessarily know what is reinforcing for themselves, or the students could be choosing what they think would please or impress the teacher. Schedule of Reinforcement An important principle for any behavior analyst to keep in mind is the schedule of reinforcement. Reinforcement can be provided on either a fixed ratio or a variable ratio schedule, where the ratio refers to the number of reinforcements over the number of responses required to receive a reinforcement. For example, if a child receives a punishment for every three times he talks without being permitted, the ratio schedule of reinforcement would be fixed at one-third. Reinforcement can also be provided on a fixed or variable interval schedule. Here, the interval refers the time lag between the response and the reinforcement. In a fixed interval schedule the teacher reinforces a child for a behavior after a specified amount of time; in a variable interval schedule the teacher can vary the interval between response and reinforcement. Research has demonstrated that children learn appropriate behavior more rapidly when reinforcement is provided on either a variable ratio schedule or a variable interval schedule. In other words, it is better to surprise a child with a reinforcement that to have him expect it and know exactly when it will occur.
4. Defining Behavioral Problems and Goals

One of the first tasks in a behavior modification approach is to operationally define the target behaviors and the goals that will change these behaviors. Operationally defining problems and goals means breaking them down into measurable components. Describing a child as "lazy" and defining a goal of making him more "industrious" do not allow the behavior analyst much opportunity to effect change. However, if vague terms like "laziness" are broken down into measurable components, such as completion rate of assignments, accuracy level, and instances of volunteering, the teacher can then set the goal of increasing these.

There are other reasons for operationally defining behaviors. It facilitates communication among teachers, parents, and others concerned with the child by eliminating ambiguous terms. Behavioral changes become more easily monitored when goals are measurable. Finally, operational definitions maintain objectivity and consistency in observations, preventing teachers' own hopes and expectations from influencing observations.

After the target behaviors and goals have been selected, the teacher must specify the objectives, or the rules and directions, to the students. While studies have shown that making rules clear alone will not increase behavior, in many cases it is an essential component of behavior modification. Children cannot alter their behavior if they do not know specifically, or if they have to guess at what behaviors will be reinforced, either positively or negatively. Stating and occasionally repeating classroom rules can also serve to prompt the students to rehearse the rules themselves and to remind each other of the rules. The objective comprises three elements: the desired response and its properties; the situation under which the response is to occur; and the criteria for determining when delineating the specific behaviors of that response, but also the properties of these behaviors, such as shape or form, frequency, duration and intensity. For example, the teacher can specify that talking in a normal tone of voice is acceptable, but screaming is not.

The teacher must also inform the students of the situation where the response is to occur. He might want the students to read quietly at their desk for the next forty-five minutes, but after the reading period is over they can discuss quietly in small groups what they have just read. Thus, talking quietly is an unacceptable response in one situation but appropriate in the other. A behavioral criterion usually involves some minimum (or maximum, if the response is undesirable) rate and duration of the response. The criterion level accepted should not be some unattainable, ideal level, but the minimum acceptable level. Teachers might consider
letting students participate in defining target behaviors and setting criteria. There is some evidence that if children are allowed to help in setting their own standards and contingent tasks, the probability of on-task behavior increases.

**Topic : Behavioral Contracting**

**Topic Objective:**

At the end of this topic student would be able to:

- Explain The Benefits of Using a Contract
- Explain Creating a Behavior Contract
- Explain Application in classrooms and similar settings
- Explain Description & Definition
- Explain Steps of making Behavior Contract

**Definition/Overview:**

**Behavioral Contract:** According to Intervention Central, the behavioral contract is a simple positive-reinforcement tool that is widely used by teachers to change student behavior. The behavior contract spells out in detail the expectations of the student, the teacher, and sometimes the parents. The student usually has input into the conditions that are established, which means that the student is more likely to be motivated to abide by the terms of the behavior contract than if the terms were imposed by someone else.

According to About.com, a behavior contract is a written agreement about how the individual will behave. It indicates the appropriate consequence should the student neglect to behave according to the contract. It may also state the reinforcer to be used for successful compliance. The contract provides students with structure and self-management.

**Key Points:**

1. **Description & Definition**

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According to About.com, a behavior contract is a written agreement about how the individual will behave. It indicates the appropriate consequence should the student neglect to behave according to the contract. It may also state the reinforcer to be used for successful compliance. The contract provides students with structure and self-management.

2. Application in classrooms and similar settings

Sometimes students have a hard time knowing exactly how to act within the classroom setting or need a reminder about appropriate behavior and expectations. Contracts can be made with individual students or with the whole class. Sometimes a class meeting will help with negotiation of ideas on what rules to add to a behavioral contract. They can be helpful in setting targets and goals for students. They also give students a clear cut explanation of what is expected of them, and what will happen if they fail to meet the expectations.

3. The Benefits of Using a Contract

According to Newell and Jeffrey:

- The teacher and students have a shared goal.
- Clear and positive outcomes are created.
- The students don't have to guess the rules.
- What the student has to do is clearly stated.
- Contracts encourage open communication.
- Contracts make it clear to students how they can receive positive attention.
- Contracts help to create a shared and safe learning experience.
- They stop students from game playing.
- Contracts create something neutral in times of conflict.
- Contracts give a sense of fairness and justice.
- They encourage students to adopt and model adult behavior.

According to the Council for Exceptional Children, behavioral contracting is a good way to teach children the following adult-like behaviors:
- Developing self-control
- Developing responsibility for one's own behavior
- Learning to negotiate and compromise with other people
- Beginning to self-monitor behavior according to a designated standard

4. Creating a Behavior Contract

- The teacher needs to decide which specific behaviors to focus on for this contract.
- The teacher should then meet with the student to write the contract.
- The contract should include:
  - the goals (will keep hands to him/herself while standing in line, etc)
  - a clear and detailed definition of the unwanted behaviors
  - how the student will earn a reward and what that reward will be
  - the consequences should the child not adhere to the behavior described in the contract
  - clearly stated time increments (hourly, half day, full day, weekly)
  - a definition of how the behavior will be monitored
  - a date for reviewing the contract
  - a place for signatures of the student, the teacher, and possibly the parents

It is important to involve the student in the writing of the contract. Ask the student to make suggestions for reinforcement and consequence for failure to comply. Contracts should name specific behaviors to be changed. Focus on 1 or 2 behaviors at a time. Consequences and reinforcers need to be thought out clearly. You can include tangible reinforcers, social or activity based reinforcers, curtailment of an activity, tokens that can be cashed in for a specific activity etc. NOTE: A minor problem with behavior contracts is that the focus is on controlling a student's behavior rather than helping the child makes wise choices. Keep this in mind when developing behavior contracts. Behavior contracts don't often work right away, be patient and consistent, you should see results. Know when it's time to review and revise. When the contract is not working well, be sure to include the student when making revisions.
5. Steps of making Behavior Contract

5.1 Customize The Contract

First, make a plan for change. Use this Behavior Contract form as a guide for the meeting you will soon have with the student and his/her parents. Tailor the form to your particular situation, taking into consideration the personality and preferences of the child you are helping.

5.2 Set Up A Meeting

Next, hold a meeting with the involved parties. Perhaps your school has an assistant principal in charge of discipline; if so, invite this person, too. The student and his/her parents should attend as well.

Focus on 1-2 particular behaviors that you would like to see change. Don’t try to change everything at once. Take baby steps toward major improvement so that it feels more "do-able" to the child. Also, the parents will feel less defensive towards you if you make it seem like there's only a little "fine-tuning" to be done. Make it clear that you called this meeting because you care about this child and want to see him/her improve in school this year. Emphasize that the parent, student, and teacher are all part of the same team. Convey that "I can't do it without you. We're all in this together."

5.3 Communicate The Consequences

Define the tracking method to be used on a daily basis for monitoring student behavior. Describe the rewards and consequences that correlate with behavior choices. Be very specific and clear in this area. Use quantitative numbers wherever possible. Involve the parents in providing the rewards and consequences, taking much of the pressure of enforcement out of your hands. Constant school-to-home communication will go a long way towards significant progress with this child. Make sure that the chosen consequences are truly important to this particular child; you can even ask the child for input which will make him/her buy into the process even further. Have all involved parties sign the agreement and end the meeting on a positive note.
5.4 Schedule A Follow-Up Meeting

Schedule a follow-up meeting to discuss progress and make adjustments to the plan as needed. The follow-up meeting should be in 2-6 weeks, depending upon your assessment of the situation. Let the child know that the group will be meeting again soon to discuss progress.

5.5 Be Consistent In The Classroom

In the meantime, be very consistent with this child in the classroom. Stick to the wording of the behavior contract agreement to a "t." When the child makes good behavior choices, heap sincere praise upon him/her. When the child makes not so good choices, do not be apologetic; if needed, pull out the contract and review the terms that were agreed upon. Emphasize the positives that come along with good behavior choices and help the child to get used to new habits of good behavior.

Step 6 - Be Patient And Trust The Plan

Most of all, be patient. Do not give up on this child. While you may feel like pulling your hair out right now, as you see the child grow and develop, you may find this relationship to be one of the most rewarding of your teaching career. Such children often need extra love and positive attention so don't let your frustrations get the best of you.

In Section 2 of this course you will cover these topics:
- Individual Disruptive Incident Barometer
- Signal Time-Out For Minor Disruptive Behavior

**Topic : Individual Disruptive Incident Barometer**

**Topic Objective:**

At the end of this topic student would be able to:

- Explain The theory
- Explain History and usage of the term
- Explain A Disruptive Technology
- Explain Disruptive Incident Barometer
Definition/Overview:

Barometer: A barometer is an instrument used to measure atmospheric pressure. It can measure the pressure exerted by the atmosphere by using water, air, or mercury. Pressure tendency can forecast short term changes in the weather. Numerous measurements of air pressure are used within surface weather analysis to help find surface troughs, high pressure systems, and frontal boundaries.

Key Points:

1. Disruptive Incident Barometer

When analyzing inappropriate behavior excesses the first step is to determine if the behavior interferes with the persons ability to function or interact appropriately in typical environmental conditions. To do this observational data needs to be taken for an extended amount of time to determine whether the behavior is disruptive. This is a very important part of the process because if the behavior only has occurred once or very infrequently then it would not be considered a disruptive behavior which needs to be altered. When observing a new behavior evidence has shown that if you do not bring attention or acknowledge the behavior, it may not re-occur because the person exhibiting the behavior has not achieved the desired reaction they had hoped for.

Once observational data has determined that a target behavior is considered disruptive, then you must operationally define the behavior. For example a tantrum behavior of a specific individual could be defined as: Crying with or without tears, screaming loudly, making statements like no, no, no, pounding fists on the table, swiping lesson materials, getting up and running from their desk, and falling to the ground. When you are defining a behavior and also writing a descriptive analysis of the behavior, it must always be specific, observable, and measurable. Based on these principles an example of a descriptive analysis of a self injurious behavior it would be: Tim stood up and hit the back of his head on the wall four times then dropped to the ground, rolled over, hit his forehead on the carpeted area three times, then with his right hand closed in a fist he hit his forehead five times.
2. A Disruptive Technology

A disruptive technology or disruptive innovation is a technological innovation that improves a product or service in ways that the market does not expect, typically by being lower priced or designed for a different set of consumers.

Disruptive innovations can be broadly classified into low-end and new-market disruptive innovations. A new-market disruptive innovation is often aimed at non-consumption (i.e., consumers who would not have used the products already on the market), whereas a lower-end disruptive innovation is aimed at mainstream customers for whom price is more important than quality.

Disruptive technologies are particularly threatening to the leaders of an existing market, because they are competition coming from an unexpected direction. A disruptive technology can come to dominate an existing market by either filling a role in a new market that the older technology could not fill (as cheaper, lower capacity but smaller-sized flash memory is doing for personal data storage in the 2000s) or by successively moving up-market through performance improvements until finally displacing the market incumbents (as digital photography has largely replaced film photography).

In contrast to "disruptive technology", a "revolutionary technology" introduces products with highly improved new features into the market, such as the automobile or telephone. A "sustaining technology or innovation" improves product performance of established products. Sustaining technologies are incremental.

3. History and usage of the term

The term disruptive technology was coined by Clayton M. Christensen and introduced in his 1995 article Disruptive Technologies: Catching the Wave, which he coauthored with Joseph Bower. The article is aimed at managing executives who make the funding/purchasing decisions in companies rather than the research community. He describes the term further in his 1997 book The Innovator's Dilemma. In his sequel, The Innovator's Solution, Christensen replaced disruptive technology with the term disruptive innovation because he recognized that few technologies are intrinsically disruptive or sustaining in character. It is the strategy or business model that the technology enables that creates the disruptive impact.
The concept of disruptive technology continues a long tradition of the identification of radical technical change in the study of innovation by economists, and the development of tools for its management at a firm or policy level.

4. The theory

Christensen distinguishes between "low-end disruption" which targets customers who do not need the full performance valued by customers at the high-end of the market and "new-market disruption" which targets customers who have needs that were previously unserved by existing incumbents.

"Low-end disruption" occurs when the rate at which products improve exceeds the rate at which customers can adopt the new performance. Therefore, at some point the performance of the product overshoots the needs of certain customer segments. At this point, a disruptive technology may enter the market and provide a product which has lower performance than the incumbent but which exceeds the requirements of certain segments, thereby gaining a foothold in the market.

In low-end disruption, the disruptor is focused initially on serving the least profitable customer, who is happy with a good enough product. This type of customer is not willing to pay premium for enhancements in product functionality. Once the disruptor has gained foothold in this customer segment, it seeks to improve its profit margin. To get higher profit margins, the disruptor needs to enter the segment where the customer is willing to pay a little more for higher quality. To ensure this quality in its product, the disruptor needs to innovate. The incumbent will not do much to retain its share in a not so profitable segment, and will move up-market and focus on its more attractive customers. After a number of such encounters, the incumbent is squeezed into smaller markets than it was previously serving. And then finally the disruptive technology meets the demands of the most profitable segment and drives the established company out of the market.

"New market disruption" occurs when a product fits a new or emerging market segment that is not being served by existing incumbents in the industry. The Linux operating system (OS) when introduced was inferior in performance to other server operating systems like Unix and Windows NT. But the Linux OS is inexpensive compared to other server operating systems.
After years of improvements, Linux is now installed in 87.8% of the world's 500 fastest supercomputers.

**Topic: Signal Time-Out For Minor Disruptive Behavior**

**Topic Objective:**

At the end of this topic, students would be able to:

- Explain Children With Oppositional Defiant Disorder
- Explain Disruptive Behavior Disorders treatment
- Explain Causes of Disruptive Behavior Disorders
- Explain Moderate or Minor Disruption

**Definition/Overview:**

**Disruptive Behavior Disorders:** Disruptive Behavior Disorders involve consistent patterns of behaviors that break the rules. Young people of all ages break some rules, especially less important ones. More serious oppositional behavior is a normal part of childhood for children two and three years old and for young teenagers. At other times, when young people are routinely very, very oppositional and defiant of authority, a mental health disorder may be identified.

**Key Points:**

1. **Moderate or Minor Disruption**

   The behavior is perceived as disruptive, disrespectful, offensive, and/or threatening and interferes with the learning of other students or impedes the delivery of college services. This behavior may include speech or action that is not part of the learning process but is perceived to create an atmosphere of hostility, intimidation, ridicule or anxiety among other students, instructors or staff. The student may be verbally harassing the instructor/staff/students, or making unreasonable demands for attention or special treatment to the detriment of other students in or out of the classroom, or engaging in other behaviors covered in the Student Conduct Code.
The behavior may stem from a conflict with the instructor, staff or another student, from the course itself, or personal problems that may be causing inappropriate behavior. For example, the student deliberately distracts other students from the task at hand, talks loudly out of turn during lecture, monopolizes the discussion, makes disrespectful comments (written or verbal) to the instructor or to another student, comes late and is disruptive settling in, hinders cooperation, harasses or intimidates a college employee or another student, or engages in other behaviors covered in the Student Conduct Code.

- **Step 1:** Make a reasonable attempt to talk to the student first. Determine whether the disruptive behavior is in any way related to problems that the student is having in class or to other situational factors which the instructor may be able to directly affect. Very often a private conversation with the student can be more productive than a scolding or a warning in the presence of other students.

- **Step 2:** When the instructor acts reasonably and the student remains disruptive, disrespectful, offensive and/or threatening, the instructor may choose to:
  - write up a contract with the student that clearly identifies behavior and actions for the student to take and the consequences of inappropriate behaviors;
  - contact the Division Chair and/or the Counseling Office, who may choose to consult with the instructor outside of class, observe the behavior in class, meet with the student to discuss the situation, or facilitate a communication process between the instructor and student. Depending on the nature and perception of the disruption, the student may be referred to other support services; and/or
  - ask the student to leave the classroom or learning environment;

- **Step 3:** If you ask the student to leave, and the student leaves, or refuses to leave, call Security (x142, x245, or x273). Document the incident. Follow up with Security and take proactive measures for your safety.

- **Step 4:** To take formal action against the student, notify your Division Chair and the Dean of Student Services immediately of this incident in writing.

2. **Causes of Disruptive Behavior Disorders**

Research has identified both biological and environmental causes for Disruptive Behavior Disorders. Youngsters most at risk for Oppositional Defiant and Conduct Disorders are those who have low birth weight, neurological damage or Attention Deficit Hyperactivity Disorder. Youngsters may also be at risk if they were rejected by their mothers as babies, separated
from their parents and not given good foster care, physically or sexually abused, raised in homes with mothers who were abused, or living in poverty.

3. Disruptive Behavior Disorders treatment

Because so many of the factors that cause Disruptive Behavior Disorders happen very early in a child’s life, it is important to recognize the problems as early as possible and get treatment. The treatment that has shown the best results is a combination of:

- Specialized parent skills training
- Behavior therapies to teach young people how to control and express feelings in healthy ways
- Coordination of services with the young person's school and other involved agencies
- Parent training and therapy with the child or adolescent, most effective when done in the family home

No medications have been consistently useful in reducing the symptoms of Oppositional Defiant or Conduct Disorders. Medications may be helpful to some young people, but they tend to have side effects that must be monitored carefully.

4. Children With Oppositional Defiant Disorder

All children are oppositional from time to time, particularly when tired, hungry, stressed or upset. They may argue, talk back, disobey, and defy parents, teachers, and other adults. Oppositional behavior is often a normal part of development for two to three year olds and early adolescents. However, openly uncooperative and hostile behavior becomes a serious concern when it is so frequent and consistent that it stands out when compared with other children of the same age and developmental level and when it affects the child's social, family, and academic life.

In children with Oppositional Defiant Disorder (ODD), there is an ongoing pattern of uncooperative, defiant, and hostile behavior toward authority figures that seriously interferes with the youngster's day to day functioning. Symptoms of ODD may include:

- frequent temper tantrums
- excessive arguing with adults
- active defiance and refusal to comply with adult requests and rules
• deliberate attempts to annoy or upset people
• blaming others for his or her mistakes or misbehavior
• often being touchy or easily annoyed by others
• frequent anger and resentment
• mean and hateful talking when upset
• seeking revenge

The symptoms are usually seen in multiple settings, but may be more noticeable at home or at school. Five to fifteen percent of all school-age children have ODD. The causes of ODD are unknown, but many parents report that their child with ODD was more rigid and demanding than the child's siblings from an early age. Biological and environmental factors may have a role.

A child presenting with ODD symptoms should have a comprehensive evaluation. It is important to look for other disorders which may be present; such as attention-deficit hyperactive disorder (ADHD), learning disabilities, mood disorders (depression, bipolar disorder) and anxiety disorders. It may be difficult to improve the symptoms of ODD without treating the coexisting disorder. Some children with ODD may go on to develop conduct disorder.

Treatment of ODD may include: Parent Training Programs to help manage the child's behavior, Individual Psychotherapy to develop more effective anger management, Family Psychotherapy to improve communication, Cognitive-Behavioral Therapy to assist problem solving and decrease negativity, and Social Skills Training to increase flexibility and improve frustration tolerance with peers. A child with ODD can be very difficult for parents. These parents need support and understanding. Parents can help their child with ODD in the following ways:

• Always build on the positives, give the child praise and positive reinforcement when he shows flexibility or cooperation.
• Take a time-out or break if you are about to make the conflict with your child worse, not better. This is good modeling for your child. Support your child if he decides to take a time-out to prevent overreacting.
• Pick your battles. Since the child with ODD has trouble avoiding power struggles, prioritize the things you want your child to do. If you give your child a time-out in his room for
misbehavior, don't add time for arguing. Say "your time will start when you go to your room."

- Set up reasonable, age appropriate limits with consequences that can be enforced consistently.
- Maintain interests other than your child with ODD, so that managing your child doesn't take all your time and energy. Try to work with and obtain support from the other adults (teachers, coaches, and spouse) dealing with your child.
- Manage your own stress with exercise and relaxation. Use respite care as needed.

Many children with ODD will respond to the positive parenting techniques. Parents may ask their pediatrician or family physician to refer them to a child and adolescent psychiatrist, who can diagnose and treat ODD and any coexisting psychiatric condition.

In Section 3 of this course you will cover these topics:
- Removal Time-Out For Severe Disruptive And Aggressive Behavior
- Positive Compliance Mo

**Topic : Removal Time-Out For Severe Disruptive And Aggressive Behavior**

**Topic Objective:**

At the end of this topic student would be able to:

- Explain Aggression
- Explain Aggression in humans
- Explain Aggression and culture
- Explain Aggression in media
- Explain Situational factors
- Explain Aggression and gender
- Explain Aggression in the brain
- Explain Neurotransmitters and hormones
- Explain Genetics and aggression
- Explain Passive-aggressive behaviour
Definition/Overview:

Aggression: In psychology, as well as other social and behavioral sciences, aggression refers to behavior between members of the same species that is intended to cause pain or harm. Predatory or defensive behavior between members of different species is not normally considered "aggression." Aggression takes a variety of forms among humans and can be physical, mental, or verbal. Aggression should not be confused with assertiveness, although the terms are often used interchangeably among laypeople, e.g. an aggressive salesperson.

Key Points:

1. Aggression

There are two broad categories of aggression. These include hostile, affective, or retaliatory aggression and instrumental, predatory, or goal-oriented aggression. Empirical research indicates that there is a critical difference between the two, both psychologically and physiologically. Some research indicates that people with tendencies toward affective aggression have lower IQs than those with tendencies toward predatory aggression. If only considering physical aggression, males tend to be more aggressive than females. One explanation for this difference is that females are physically weaker than men, and so need to resort to other means. Females of different cultures have a variety of non physical means to cause harm to their husbands. On Bellona Island, a culture based on male dominance and physical violence, women tend to get into conflicts with other women more frequently than with men. When in conflict with males, they rarely use physical means. They instead make up songs mocking the man, which spread across the island and humiliate him. If a woman wanted to kill a man, she would either convince her relatives to kill him or hire an assassin. These are both forms of indirect aggression since the aggressor (female) is trying to hurt someone without putting herself in direct danger.

2. Aggression in humans

Although humans share aspects of aggression with non-human animals, they differ from most of them in the complexity of their aggression because of factors such as culture, morals, and social situations. A wide variety of studies have been done on these situations.
3. Aggression and culture

Culture is a distinctly human factor that plays a role in aggression. Kung Bushmen were described as the "harmless people" by Elizabeth Marshall Thomas. Other researchers, however, have countered this point of view, calculating that the homicide rate among Bushmen is actually higher than that of most modern industrial societies. Lawrence Keeley argues that the "peaceful savage" is a myth that is unsupported by the bulk of anthropological and archeological evidence. Hunter gatherer societies do not have possessions to fight over, but they may still come to conflict over status and mating opportunities.

Empirical cross-cultural research has found differences in the level of aggression between cultures. In one study, American men resorted to physical aggression more readily than Japanese or Spanish men, whereas Japanese men preferred direct verbal conflict more than their American and Spanish counterparts. Within American culture, southerners were shown to become more aroused and to respond more aggressively than northerners when affronted. There is also a higher homicide rate among young white southern men than among white northern men in the United States. Changes in dominant behavior or in social status causes changes in testosterone levels. Reports of changes in testosterone of young men during athletic events, which involve face-to-face competition with a winner and a loser, reveal that testosterone rises shortly before their matches, as if in anticipation of the competition. Also, one to two hours after the competitive match, the testosterone levels of the winners are high relative to those levels of the losers. It is also important to take into account the type of conflict that is occurring when assessing aggression. Is the conflict between groups, within a group, within a family? The sex of those involved in the conflict is also critical. Male-male, male-female and female-female encounters should all be clearly distinguished from one another. Same sex encounters are more frequent than inter-sex encounters and this could affect the level of aggression present.

4. Aggression in media

Behaviors like aggression can be learned by watching and imitating the behavior of others. A considerable amount of evidence suggests that watching violence on television increases the likelihood of short-term aggression in children, though for a dissenting viewpoint. Individuals may differ in how they respond to violence. The greatest impact is on those who are already prone to violent behavior. Adults may be influenced by violence in media as well. A long-
term study of over 700 families found "a significant association" between the amount of time spent watching violent television as a teenager and the likelihood of committing acts of aggression later in life. The results remained the same in spite of factors such as family income, parental education and neighborhood violence.

Although exposure to violence in media is associated with likelihood of short-term increases in aggression, none of these studies provide evidence for a definitive causal mechanism. Instead, violence in media may be one of many factors, or it may play a maintenance role since violent media tend to be selected by people who are prone to violence.

5. Situational factors

Alcohol impairs judgment, making people much less cautious than they usually are. It also disrupts the way information is processed. A drunk person is much more likely to view an accidental event as a purposeful one, and therefore act more aggressively.

Pain and discomfort also increase aggression. Even the simple act of placing one's hands in cold water can cause an aggressive response. Hot temperatures have been implicated as a factor in a number of studies. One study completed in the midst of the civil rights movement found that riots were more likely on hotter days than cooler ones. Students were found to be more aggressive and irritable after taking a test in a hot classroom. Drivers in cars without air conditioning were also found to be more likely to honk their horns.

Frustration is another major cause of aggression. The frustration-aggression theory states that aggression increases if a person feels that he or she is being blocked from achieving a goal. One study found that the closeness to the goal makes a difference. The study examined people waiting in line and concluded that the 2nd person was more aggressive than the 12th one when someone cut in line. Unexpected frustration may be another factor. In a separate study, a group of students were collecting donations over the phone. Some of them were told that the people they would call would be generous and the collection would be very successful. The other group was given no expectations. The group with high expectations was much more upset and became more aggressive when no one was pledging.

There is some evidence to suggest that the presence of violent objects such as a gun can trigger aggression. In a study done by Leonard Berkowitz and Anthony Le Page, college
students were made angry and then left in the presence of a gun or badminton racket. They were then led to believe they were delivering electric shocks to another student, as in the Milgram experiment. Those who had been in the presence of the gun administered more shocks. It is possible that a violence-related stimulus increases the likelihood of aggressive cognitions by activating the semantic network.

6. Aggression and gender

Gender is a factor that plays a role in both human and animal aggression. Males are generally more physically aggressive than females, and men commit the vast majority of murders. This is one of the most robust and reliable behavioral sex differences, and it has been found across many different age groups and cultures. There is evidence that males are quicker to aggression and more likely than females to express their aggression physically. However, when considering indirect forms of aggression, such as relational aggression and social rejection, females and males are equally aggressive.

7. Aggression in the brain

Many researchers focus on the brain to explain aggression. The areas involved in aggression in mammals include the amygdala, hypothalamus, prefrontal cortex, cingulate cortex, hippocampus, septal nuclei, and periaqueductal gray of the midbrain. Because of the difficulties in determining the intentions of animals, aggression is defined in neuroscience research as behavior directed at an object or animal which results in damage or harm to that object or animal.

The hypothalamus and periaqueductal gray of the midbrain are the most critical areas controlling aggression in mammals, as shown in studies on cats, rats, and monkeys. These brain areas control the expression of all the behavioral and autonomic components of aggression in these species, including vocalization. They have direct connections with both the brainstem nuclei controlling these functions and areas such as the amygdala and prefrontal cortex.

Electrical stimulation of the hypothalamus causes aggressive behavior. The hypothalamus expresses receptors that help determine aggression levels based on their interactions with the neurotransmitters serotonin and vasopressin.
The amygdala is also critically involved in aggression. Stimulation of the amygdala results in augmented aggressive behavior in hamsters, while lesions of an evolutionarily homologous area in the lizard greatly reduce competitive drive and aggression. Several experiments in attack-primed Syrian Golden Hamsters support the claim of the amygdala being involved in control of aggression. Using expression of c-fos as a neuroanatomically localized marker of activity, the neural circuitry involved in the state of attack readiness in attack primed hamsters was studied. The results showed that certain structures of the amygdala were involved in aggressiveness: the medial nucleus and the cortical nuclei showed distinct differences in involvement as compared to other structures such as the lateral and basolateral nuclei and central nucleus of the amygdala, which were not associated with any substantial changes in aggressiveness. In addition, c-fos expression was found most clearly in the most dorsal and caudal aspects of the corticomedial amygdala (CMA). In the same study, it was also shown that lesions of the CMA significantly reduced the number of aggressive behaviors. Eight of eleven subjects failed to attack. Also a correlation between lesion site and attack latency was determined: the more anterior the lesion, the longer mean elapsed time to the aggressive behavior.

The prefrontal cortex (PFC) has been implicated in aggressive psychopathology. Reduced activity of the prefrontal cortex, in particular its medial and orbitofrontal portions, has been associated with violent/antisocial aggression. Specifically, regulation of the levels of the neurotransmitter serotonin in the PFC has been connected with a particular type of pathological aggression, induced by subjecting genetically predisposed, aggressive, wild-type mice to repeated winning experience; the male mice selected from aggressive lines had lower serotonin tissue levels in the PFC than the low-aggressive lines in this study.

8. Neurotransmitters and hormones

Various neurotransmitters and hormones have been shown to correlate with aggressive behavior. The most often mentioned of these is the hormone testosterone. In one source, it was noted that concentration of testosterone most clearly correlated with aggressive responses involving provocation. In adulthood, it is clear that testosterone is not related to any consistent methods of measuring aggression on personality scales, but several studies of the concentration of blood testosterone of convicted male criminals who committed violent crimes compared to males without a criminal record or who committed non-aggressive crimes revealed in most cases that men who were judged aggressive/dominant had higher
blood concentrations of testosterone than controls. However, a correlation between testosterone levels and aggression does not prove a causal role for testosterone. Studies of testosterone levels of male athletes before and after a competition revealed that testosterone levels rise shortly before their matches, as if in anticipation of the competition, and are dependent on the outcome of the event: testosterone levels of winners are high relative to those of losers. Interestingly, testosterone levels in female criminals versus females without a criminal record mirror those of males: testosterone levels are higher in women who commit aggressive crimes or are deemed aggressive by their peers than non-aggressive females. However, no specific response of testosterone levels to competition was observed in female athletes, although a mood difference was noted. Testosterone has been shown to correlate with aggressive behavior in mice and in some humans, but in contrast to some long-standing theories, various experiments have failed to find a relationship between testosterone levels and aggression in humans. The possible correlation between testosterone and aggression could explain the "roid rage" that can result from anabolic steroid use, although an effect of abnormally high levels of steroids does not prove an effect at physiological levels.

Another line of research has focused more on the effects of circulating testosterone on the nervous system mediated by local metabolism within the brain. Testosterone can be metabolized to 17b-estradiol by the enzyme aromatase or to 5a-dihydrotestosterone by 5a-reductase. Aromatase is highly expressed in regions involved in the regulation of aggressive behavior, such as the amygdala and hypothalamus. In studies using genetic knock out techniques in inbred mice, male mice that lacked a functional aromatase enzyme displayed a marked reduction in aggression. Long-term treatment of these mice with estradiol partially restored aggressive behavior, suggesting that the neural conversion of circulating testosterone to estradiol and its effect on estrogen receptors affects inter-male aggression. Also, two different estrogen receptors, ERα and ERβ, have been identified as having the ability to exert different effects on aggression. In studies using estrogen receptor knockout mice, individuals lacking a functional ERα displayed markedly reduced inter-male aggression while male mice that lacked a functional ERβ exhibited normal or slightly elevated levels of aggressive behavior. These results imply that ERα facilitates male-male aggression, where as ERβ may inhibit aggression. However, different strains of mice show the opposite pattern in that aromatase activity is negatively correlated with aggressive behavior. Also, in a different strain of mice the behavioral effect of estradiol is dependent on daylength: under long-days
(16h of light) estradiol reduces aggression, and under short-days (8h of light) estradiol rapidly increases aggression.

Glucocorticoids also play an important role in regulating aggressive behavior. In adult rats, acute injections of corticosterone promote aggressive behavior and acute reduction of corticosterone decreases aggression; however, a chronic reduction of corticosterone levels can produce abnormally aggressive behavior. In addition, glucocorticoids affect development of aggression and establishment of social hierarchies. Adult mice with low baseline levels of corticosterone are more likely to become dominant than are mice with high baseline corticosterone levels.

Dehydroepiandrosterone (DHEA) is the most abundant circulating androgen and can be rapidly metabolized within target tissues into potent androgens and estrogens. Gonadal steroids generally regulate aggression during the breeding season, but non-gonadal steroids may regulate aggression during the non-breeding season. Castration of various species in the non-breeding season has no effect on territorial aggression. In several avian studies, circulating DHEA has been found to be elevated in birds during the non-breeding season. These data support the idea that non-breeding birds combine adrenal and/or gonadal DHEA synthesis with neural DHEA metabolism to maintain territorial behavior when gonadal testosterone secretion is low. Similar results have been found in studies involving different strains of rats, mice, and hamsters. DHEA levels also have been studied in humans and may play a role in human aggression. Circulating DHEAS (its sulfated ester) levels rise during adrenarche (~7 years of age) while plasma testosterone levels are relatively low. This implies that aggression in pre-pubertal children with aggressive conduct disorder might be correlated with plasma DHEAS rather than plasma testosterone, suggesting an important link between DHEAS and human aggressive behavior.

Another chemical messenger with implications for aggression is the neurotransmitter serotonin. In various experiments, serotonin action was shown to be negatively correlated with aggression. This correlation with aggression helps to explain the aggression-reducing effects of selective serotonin reuptake inhibitors such as fluoxetine, aka prozac.

While serotonin and testosterone have been the two most researched chemical messengers with regards to aggression, other neurotransmitters and hormones have been shown to relate to aggressive behavior as well. The neurotransmitter vasopressin causes an increase in
aggressive behavior when present in large amounts in the anterior hypothalamus. The effects of norepinephrine, cortisol, and other neurotransmitters are still being studied.

9. Genetics and aggression

In a nonmammalian example, the fruitless gene in Drosophila melanogaster is a critical determinant for how fruit flies fight. Patterns of aggression can be switched, with males using female patterns of aggression or females using male patterns, by manipulating either the fruitless or transformer genes in the brain. Candidate genes for differentiating aggression between the sexes are the Sry (sex determining region Y) gene, located on the Y chromosome and the Sts (steroid sulfatase) gene. The Sts gene encodes the steroid sulfatase enzyme, which is pivotal in the regulation of neurosteroid biosynthesis. It is expressed in both sexes, is correlated with levels of aggression among male mice, and increases dramatically in females after parturition and during lactation, corresponding to the onset of maternal aggression.

10. Passive-aggressive behavior

Passive-aggressive behavior is passive, sometimes obstructionist resistance to following through with expectations in interpersonal or occupational situations. It can manifest itself as learned helplessness, procrastination, stubbornness, resentment, sullenness, or deliberate/repeated failure to accomplish requested tasks for which one is (often explicitly) responsible. It is a defense mechanism, and (more often than not) only partly conscious. For example a worker asked to organize a meeting might happily agree, but will then take so long on each task in the process and offer excuses such as calls not being returned or that the computer is too slow, that things aren't ready when the meeting is due to start. A colleague is forced to hurriedly complete the task, or the meeting is postponed.

Passive-aggressiveness (negativistic personality trait) is a personality trait said to be marked by a pervasive pattern of negative attitudes and passive, usually disavowed resistance in interpersonal or occupational situations. It was listed as an Axis II personality disorder in the DSM-III-R, but was moved in the DSM-IV to Appendix B ("Criteria Sets and Axes Provided for Further Study") because of controversy and the need for further research on how to also categorize the behaviors in a future edition. By way of explanation on that point, "Straight Dope" columnist Cecil Adams writes:
Merely being passive-aggressive isn't a disorder but a behavior sometimes a perfectly rational behavior, which lets you dodge unpleasant chores while avoiding confrontation. It's only pathological if it's a habitual, crippling response reflecting a pervasively pessimistic attitude.

When the behaviors are part of a person's personality "disorder" or personality style, repercussions are not usually immediate, but instead accumulate over time as the individuals affected by the person come to recognize the disavowed aggression coming from that person. People with this personality style are often quite unconscious of their impact on others, and thus may be genuinely dismayed when held to account for the inconvenience or discomfort caused by their passive-aggressive behaviors. In that context, they fail to see how they might have provoked a negative response, so they feel misunderstood, held to unreasonable standards, and/or put-upon.

Remedying this behavior can be difficult: efforts to convince the subject that their unconscious feelings are being expressed passively, and that the passive expression of those feelings (their behavior) invokes other people's anger or disappointment with the person, are often met with resistance. Passive aggressive individuals will frequently avoid treatment claiming that there is no way to remedy it. Since the effectiveness of various therapies has yet to be proven, these individuals may be correct. Passive aggressive disorder may stem from a specific childhood stimulus (e.g., alcohol/drug addicted parents).

Passive aggressive behaviour was first clinically used in the context of "defying" authoritative figures. But non-compliance is not indicative of true passive aggressive behaviour, which is manifestation of repressed, self imposed oppression of emotions based on a need for acceptance. Anger turned inwards that has no other way to heal or express itself will either turn into depression, or passive aggression.

**Topic : Positive Compliance Momentum**

**Topic Objective:**

At the end of this topic student would be able to:

- Explain Behavioral momentum
- Explain Resistance to Change
- Explain Preference and Resistance to Change
**Definition/Overview:**

**Behavioral momentum:** Behavioral momentum is a theory in Quantitative Analysis of Behavior and is a comparative metaphor based on physical momentum. It describes the general relation between resistance to change (persistence of behavior) and the rate of reinforcement obtained in a given situation.

**Key Points:**

1. **Behavioral momentum**

B. F. Skinner proposed that all behavior is based on the fundamental unit of behavior termed the discriminated operant. The discriminated operant, also known as the three-term contingency, is broken down into three necessary components: an antecedent discriminative-stimulus context, a response, and a reinforcing or punishing consequence. Responding occurs in the presence of the stimulus because responding previously has resulted in a consequence in its presence.

2. **Resistance to Change**

According to behavioral momentum theory, there are two separable aspects of the discriminated operant that independently govern the rate at which a behavior response occurs and the persistence of that response behavior in the face of operant disruption punishment. The operant reinforcement contingency between the response and a reinforcing consequence governs response rates (i.e., response-reinforcer relation) by shaping a particular special pattern of responding, according to the relative law of non-absolute effect (i.e., the matching law). Conversely, the Pavlovian relation between a discriminative stimulus context environment and the rate or magnitude (but not both) of reinforcement obtained in the contextual environmental presence of that discriminative stimulus (i.e., stimulus-reinforcer relation) governs the behavior resistance to relative change (extinction process) of a response behavior pattern. Resistance to behavior change is assessed as contingent responding during context conditions of environmental stimulus response disruption (e.g., satiation, extinction) relative to stable, pre-disruption behavior response rates. Resistance to disruption has been considered a superior measure to stable response rates as an expression of the underlying strength of a response. This is because drastic differences in response rates can occur by Reinforcement contingency shaping particular patterns of
behavior (e.g., differential-reinforcement-of-high- or low-response-rate schedules) while reinforcement rates are equal. It is unclear, therefore, whether these differences in response rates necessarily indicate differences in the underlying strength of a response. According to behavioral momentum theory, the relation between response rates and resistance to change is analogous to the velocity and mass of a moving object, according to Newton's Second Law of Motion. Newton's Second Law states that the change in velocity of a moving object when an outside force is applied is directly related to that force and inversely related to the objects mass. Similarly, behavioral momentum theory states that the change in response rates under conditions of disruption (Bx) relative to baseline response rates (Bo) are directly related to the force or magnitude of disruption (f) and inversely related to the rate of reinforcement in a stimulus context (r):

$$b = \frac{\Delta \text{response rate}}{f \times r}$$

The free parameter $b$ indicates the sensitivity of resistance to change to the rate of reinforcement in the stimulus context (i.e., the stimulus-reinforcer relation). Resistance to disruption typically is assessed when two distinctive discriminative stimulus contexts alternate and signal different schedules of reinforcement (i.e., a multiple schedule). Equation 1 can be rewritten to account for resistance to change across two stimulus contexts when a disrupter is uniformly applied across contexts (i.e., $f_1 = f_2$):

$$a = \frac{\Delta \text{relative resistance to change}}{(f_1 - f_2) \times \text{relative rate of reinforcement}}$$

The subscripts indicate the different stimulus contexts. Thus, Equation 2 states that relative resistance to change is a power function of the relative rate of reinforcement across stimulus contexts, with the $a$ parameter indicating sensitivity to relative reinforcement rate. Consistent with behavioral momentum theory, resistance to disruption often has been found to be greater in stimulus contexts presenting higher rates or magnitudes of reinforcement. Strong support for resistance to change being determined by stimulus-reinforcer relations and independent of response-reinforcer relations comes from studies that add response-independent (i.e., free) reinforcement to one stimulus context. For instance, Nevin, Tota, Torquato, and Shullhad pigeons pecking lighted disks on separate variable-interval 60-s schedules of intermittent food reinforcement across two components of a multiple schedule. Additional free reinforcers were presented every 15 or 30 s on average when the disk was red, but not when the disk was green. Thus, the response-reinforcer relation was degraded when the disk was red because
each reinforcer was not immediately preceded by a response. Consistent with the matching law, response rates were lower in the red context than in the green context. However, the stimulus-reinforcer relation was enhanced in the red context because the overall rate of food presentation was greater. Consistent with behavioral momentum theory, resistance to pre-session feeding (satiation) and discontinuing reinforcement in both contexts (extinction) was greater in the red context. Similar results have been found when reinforcers are added to a context by reinforcing an alternative response.

The findings of Nevin et al. have been extended across a number of procedures and species including goldfish, rats, pigeons, and humans. The behavioral momentum framework also has been used to account for the partial-reinforcement extinction effect, to assess the persistence of drug-maintained behavior, to increase task compliance, and to understand the effects of social policies on global problems.

Although behavioral momentum theory is a powerful framework for understanding how a context of reinforcement can affect the persistence of discriminated operant behavior, there are a number of findings that are inconsistent with the theory. For instance, with equal reinforcement rates across stimulus contexts, resistance to change has been shown to be affected by manipulations to response-reinforcer relations, including schedules that produce different baseline response rates, delays to reinforcement, and by providing brief stimuli that accompany reinforcement. Also, it is unclear what factors affect relative resistance to change of responding maintained by conditioned reinforcement or two concurrently available responses when different rates of reinforcement are arranged within the same context for those responses.

3. Preference and Resistance to Change

As resistance to disruption across stimulus contexts is analogous to the inertial mass of a moving object, behavioral momentum theory also suggests that preference in concurrent-chains procedures for one stimulus context over another is analogous to the gravitational attraction of two bodies. In concurrent-chains procedures, responding on the concurrently available initial links provides access to one of two mutually exclusive stimulus contexts called terminal links. As with multiple schedules, independent schedules of reinforcement can function in each terminal-link context. The relative allocation of responding across the two initial links indicates the extent to which an organism prefers one terminal-link context over the other. Moreover, behavioral momentum theory posits that preference provides a measure of the relative conditioned-reinforcing value of the two terminal-link contexts, as described by the contextual-choice model.
Grace and Nevin assessed both relative resistance to change in a multiple schedule and preference in a concurrent-chains procedure with pigeons pecking lighted disks for food reinforcement. When the relative rate of reinforcement was manipulated identically and simultaneously across stimulus contexts in the multiple schedule and concurrent-chains procedure, both relative resistance to change and preference was greater with richer contexts of reinforcement. When all the extant resistance to change and preference data were summarized by Grace, Bedell, and Nevin, they found that those measures were related by a structural relation slope of 0.29. Therefore, relative resistance to change and preference both have been conceptualized as expressions of an underlying construct termed response strength, conditioned reinforcement value, or more generally, behavioral mass of discriminated operant behavior.

In Section 4 of this course you will cover these topics:

' The Beeper System
' Task Engagement Program (Tep)

**Topic : The Beeper System**

**Topic Objective:**

At the end of this topic student would be able to:

- Explain Beeper System Characteristics
- Explain General Summary Discussion Of Invention

**Definition/Overview:**

**Beeper System:** It is often difficult to get a child to return home at a predetermined time or when told over a phone or the like. It would be desirable therefore, to have a beeper system that could be attached to the child, such as around the wrist, waist or neck, by a band preventing removal of the beeper and that included a beeper which reached a no shut off mode wherein a speaker outputs an audible output of increasing loudness until the beeper is turned off by keyswitch controlled or kept by the supervising adult. To provide the child with a warning period a wearer silence button can be provided on the beeper.
Key Points:

1. General Summary Discussion Of Invention

It is thus an object of the invention to provide a beeper system that includes a beeper attached to a locking flexible band; the locking flexible band being constructed from a flexible material and including a locking end having a beeper housing insertion portion provided with a locking bolt aperture; the beeper including a beeper housing and a beeper circuit; the beeper housing having the beeper circuit provided therein, a band end receiving cavity formed into a sidewall thereof sized to receive a beeper housing insertion portion of a locking end of the flexible band and having a locking bolt movement portion in connection therewith, a speaker grate on an exterior surface thereof, a digital display on an exterior surface, a key receiving portion of an on/off keyswitch and band lock assembly extending through an exterior surface thereof, and a wearer speaker silence button extending through an exterior surface thereof; the beeper circuit including a programmable beeper controller having a radio input in connection with a radio receiver including a radio antenna, a display output in connection with the digital display, a speaker output in connection with a speaker, a silence input in connection with the wearer speaker silence button, and a keyswitch input in connection with the on/off keyswitch and band lock; the keyswitch and band lock including a two position electrical switch positionable between a closed and an open position with a key wherein positioning the electrical switch into the closed position causes a J-shaped mechanical locking bolt to move upward from an unlocked position to a locked position and positioning the electrical switch into the open position causes the J-shaped mechanical locking bolt to move downward from a locked position to an unlocked position; the speaker being positioned within the housing behind the speaker grate; the beeper controller circuit being programmed to activate the digital display and the speaker when an activation signal is received by the radio receiver, to temporarily allow a wearer to silence the speaker by depressing the wearer speaker silence button a fixed number of times, to reactivate the speaker after being deactivated by the depressing of the wearer speaker silence button after a predetermined time interval, to, once the last predetermined time interval has elapsed, finally activate the speaker at an increasing sound level that increases from a normal level to a high level over an elapsed period of time, and to only deactivate the speaker when an off input is received from the on/off keyswitch and band lock.
2. Beeper System Characteristics

Accordingly, a beeper system is provided. The beeper system includes a beeper attached to a locking flexible band; the locking flexible band being constructed from a flexible material and including a locking end having a beeper housing insertion portion provided with a locking bolt aperture; the beeper including a beeper housing and a beeper circuit; the beeper housing having the beeper circuit provided therein, a band end receiving cavity formed into a sidewall thereof sized to receive a beeper housing insertion portion of a locking end of the flexible band and having a locking bolt movement portion in connection therewith, a speaker grate on an exterior surface thereof, a digital display on an exterior surface, a key receiving portion of an on/off keyswitch and band lock assembly extending through an exterior surface thereof, and a wearer speaker silence button extending through an exterior surface thereof; the beeper circuit including a programmable beeper controller having a radio input in connection with a radio receiver including a radio antenna, a display output in connection with the digital display, a speaker output in connection with a speaker, a silence input in connection with the wearer speaker silence button, and a keyswitch input in connection with the on/off keyswitch and band lock; the keyswitch and band lock including a two position electrical switch positionable between a closed and an open position with a key wherein positioning the electrical switch into the closed position causes a J-shaped mechanical locking bolt to move upward from an unlocked position to a locked position and positioning the electrical switch into the open position causes the J-shaped mechanical locking bolt to move downward from a locked position to an unlocked position; the speaker being positioned within the housing behind the speaker grate; the beeper controller circuit being programmed to activate the digital display and the speaker when an activation signal is received by the radio receiver, to temporarily allow a wearer to silence the speaker by depressing the wearer speaker silence button a fixed number of times, to reactivate the speaker after being deactivated by the depressing of the wearer speaker silence button after a predetermined time interval, to, once the last predetermined time interval has elapsed, finally activate the speaker at an increasing sound level that increases from a normal level to a high level over an elapsed period of time, and to only deactivate the speaker when an off input is received from the on/off keyswitch and band lock.
Topic: Task Engagement Program (Tep)

Topic Objective:

At the end of this topic student would be able to:

- Explain Baseline Data
- Explain Procedures for TEP
- Explain Student Engagement: Clarification Of Terms
- Explain Self-Report Measures
- Explain Checklists And Rating Scales
- Explain Direct Observations
- Explain Work Sample Analysis
- Explain Focused Case Studies

Definition/Overview:

Task engagement: student is engaged in instructional materials, i.e., reading, writing, and/or listening to teacher lecture, discussion for entire interval.

Disengagement: student displays a behavior that breaks task engagement for a period of time

Behavioral standard: the number of stars needed to earn PAT

PAT or preferred activities time: a period of time during which students who have met the behavior standard can engage in designated preferred activities

Key Points:

1. Baseline Data

Baseline data involves 58 days (minimum) of recording task engagement of select students (or entire class if desired) without them earning reinforcement, allowing teacher to determine a reasonable initial standard from such data

2. Procedures for TEP

- Purchase timing mechanism
3. Student Engagement: Clarification Of Terms

As noted, various operationalizations of student engagement have appeared in published evaluations. Early studies often made use of time-based indices (e.g., time-on-task) in assessing student engagement rates. More recently, however, at least two distinct definitions have appeared in the literature. In the first, student engagement has been used to depict students' willingness to participate in routine school activities, such as attending classes, submitting required work, and following teachers' directions in class. Negative indicators of engagement in this study included unexcused absences from classes, cheating on tests, and damaging school property. In this overview, this form of engagement will be referred to as school process engagement. Defined in this way, school engagement overlaps considerably with compliance, which in its more general form involves meeting expectations implicit in school contexts.

The second definition used focuses on more subtle cognitive, behavioural, and affective indicators of student engagement in specific learning tasks. This orientation is reflected well in the definition offered by Skinner & Belmont:

Engagement versus disaffection in school refers to the intensity and emotional quality of children's involvement in initiating and carrying out learning activities. Children who are engaged show sustained behavioural involvement in learning activities accompanied by a positive emotional tone. They select tasks at the border of their competencies, initiate action
when given the opportunity, and exert intense effort and concentration in the implementation of learning tasks; they show generally positive emotions during ongoing action, including enthusiasm, optimism, curiosity, and interest. The opposite of engagement is disaffection. Disaffected children are passive, do not try hard, and give up easily in the face of challenges. They can be bored, depressed, anxious, or even angry about their presence in the classroom; they can be withdrawn from learning opportunities or even rebellious towards teachers and classmates.

From a different perspective, Pintrich and colleagues associated engagement levels with students use of cognitive, meta-cognitive and self-regulatory strategies to monitor and guide their learning processes. In this view, student engagement is viewed as motivated behaviour that can be indexed by the kinds of cognitive strategies students choose to use (e.g., simple or surface processing strategies such as rehearsal versus deeper processing strategies such as elaboration), and by their willingness to persist with difficult tasks by regulating their own learning behaviour. In this overview, the term learning task engagement will be used to refer to students cognitive investment, active participation, and emotional engagement with specific learning tasks. This definition implies the use of three interrelated criteria to assess student engagement levels:

- Cognitive criteria, which index the extent to which students are attending to and expending mental effort in the learning tasks encountered (e.g., efforts to integrate new material with previous knowledge and to monitor and guide task comprehension through the use of cognitive and meta-cognitive strategies),
- Behavioural criteria, which index the extent to which students are making active responses to the learning tasks presented (e.g., active student responding to an instructional antecedent, such as asking relevant questions, solving task-related problems, and participating in relevant discussions with teachers/peers), and
- Affective criteria, which index the level of students investment in, and their emotional reactions to, the learning tasks (e.g., high levels of interest or positive attitudes towards in the learning tasks).
4. Self-Report Measures

Self-report measures have been used by many researchers to assess the behavioural, cognitive, and affective aspects of task engagement. Items relating to the cognitive aspects of engagement often ask students to report on factors such as their attention versus distraction during class, the mental effort they expend on these tasks (e.g., to integrate new concepts with previous knowledge), and task persistence (e.g., reactions to perceived failures to comprehend the course material). Students can also be asked to report on their response levels during class time (e.g., making verbal responses within group discussions, looking for distractions and engaging in non-academic social interaction) as an index of behavioural task engagement. Affective engagement questions typically ask students to rate their interest in and emotional reactions to learning tasks on indices such as choice of activities (e.g., selection of more versus less challenging tasks), the desire to know more about particular topics, and feelings of stimulation or excitement in beginning new projects.

Researchers have used different combinations of these indicators in empirical evaluations. Thus, typical assessment protocols comprise a number of separate indices for assessing the cognitive, affective or behavioural manifestations of task-related engagement. This reflects the fact that no one instrument is likely to be able to comprehensively assess student engagement on all of the construct dimensions listed. Using separate indices also allows educators to adapt the focus of their protocols more towards their own instructional goals.

Attitudes towards and interests in, learning tasks are highly interrelated constructs and thus often assessed within the same scale. In general, an attitude is defined as a favorable or unfavorable disposition toward specific social objects. On the other hand, at least two forms of task interest, have been identified. Individual task interests refer to relatively stable and enduring feelings about different activities. Situational interests, in contrast, tend to be more activity- or context-specific. In this view, individual interests are similar to the constructs of attitudes and intrinsic motivation. Established scales for assessing attitudes and individual/situational task interests are available in most subject areas. Some researchers have also devised scales that can be adapted for use within any subject area.

In addition to asking the question of whether students are engaged in learning tasks, self-report measures can provide some indication of why this is the case. Research into achievement goal orientations, for example, has indicated positive relationships between task
or mastery goals, which reflect a desire for knowledge or skill acquisition, and students use of effective learning strategies.

5. Checklists And Rating Scales

In addition to student self-report measures, a few studies have used summative rating scales to measure student engagement levels. For example, the teacher report scales used by Skinner & Belmont and Skinner, Wellborn, & Connell asked teachers to assess their students willingness to participate in school tasks (i.e., effort, attention, and persistence during the initiation and execution of learning activities, such as When faced with a difficult problem this student doesn't try), as well as their emotional reactions to these tasks (i.e., interest versus boredom, happiness versus sadness, anxiety and anger, such as When in class, this student seems happy).

6. Direct Observations

Although self-report scales are widely used, the validity of the data yielded by these measures will vary considerably with students abilities to accurately assess their own cognitions, behaviours, and affective responses. As such, direct observations are often used to confirm students reported levels of engagement in learning tasks. Again, a number of established protocols are available in this area. While the definitions used in these models vary, most use fairly broad indices to assess engagement. The CISSAR, for example, defines engagement in term of behaviours such as attending (e.g., reading from the blackboard), working (e.g., reading aloud/silently), and resource management (e.g., looking for materials).

Regardless of the specific definition of task engagement used, most of these observational studies have used some form of momentary time sampling system. In these methods, the observer records whether a behaviour was present or absent at the moment that the time interval ends. Effective use of this system relies on some form of cuing device to momentarily observe students behaviour at pre-specified intervals (e.g., every 10 seconds). Using this method, students behaviours are coded as engaged/disengaged at the specific moment in which they were observed. An alternative approach is to use whole-interval sampling, in which students are observed for the full specified time interval (e.g., 10 seconds). In this procedure, a students behaviour is scored positively only if the behaviour is exhibited for the full duration of the time interval. While this procedure will produce
relatively conservative estimates of student engagement rates, it is also likely to be more sensitive to variations in the consistency and persistence of students' behaviour.

In classwide observations, approximately 5 minutes of observational data can generally be collected on each target student per lesson. Thus, a 30-minute observation period would allow observations of approximately 5 target students, with 6-7 sessions being required to observe a full class. In addition, to obtain a representative sample of students' behaviour over the full course of a lesson, observations are generally rotated across students so that each student is observed continuously for only one minute at a time. For example, assuming that 5 students have been randomly selected for observation during a 40-minute lesson (of which only 30 minutes will be observed, allowing for transition time) and using a 10-second whole interval schedule (with 2 seconds recording time), the first target student would be observed 5 times (i.e., over five 10-second intervals) within the first observation minute. After this minute, the observer would move to the next target student and follow the same procedure, rotating their observations across students until each has been observed for a full 5-minute period.

To confirm that measures are standardised across observers, interobserver agreement should be estimated in a pilot run to ensure that observers agree on their interpretation of task engagement. To calculate these estimates, it is necessary for two observers to observe the same target students over the same observational period and then directly compare their ratings in each time interval. A percentage agreement score can be calculated from the number of intervals in which the ratings agreed divided by the total number of intervals observed (in general, 90-100% agreement should be indicated before proceeding).

7. Work Sample Analysis

In addition to the self-report measures described, some educators have used work samples to assess levels of learning task engagement, focusing again on students' use of higher cognitive or meta-cognitive strategies in confronting learning tasks. Evidence of higher-order problem-solving and meta-cognitive learning strategies can be gathered from sources such as student projects, portfolios, performances, exhibitions, and learning journals or logs. For example, a rubric to assess the application of higher-order thinking skills in a student portfolio might include criteria for evidence of problem-solving, planning, and self-evaluation in the work. A number of formal and informal protocols for assessing students' self-regulated learning
strategies also incorporate components that focus on meta-cognitive skills. The Meta-cognitive Knowledge Monitoring Assessment and the Assessment of Cognitive Monitoring Effectiveness are more targeted measures that are suitable for use in classroom situations. Both instruments have also demonstrated sound psychometric properties in empirical evaluations.

8. Focused Case Studies

When the focus of an investigation is restricted to a small group of target students, it is often more useful to collect detailed descriptive accounts of engagement rates. Case studies allow researchers to address questions of student engagement inductively by recording details about students in interaction with other people and objects within classrooms. These accounts should describe both students' behaviours and the classroom contexts in which they occur. This might include, for example, the behaviour of peers, direct antecedents to the target students' behaviours (e.g., teacher directions), as well as the students' response and the observed consequences of that response (e.g., reactions from teachers or peers). Case studies generally attempt to place observations of engagement within the total context of the classroom and/or school, and are concerned as much with the processes associated with engagement as they are in depicting engagement levels.

In Section 5 of this course you will cover these topics:
' Grandma's Rule For Increasing In-Seat Behavior
' Response Cards

Topic: Grandma's Rule For Increasing In-Seat Behavior

Topic Objective:

At the end of this topic student would be able to:

- Explain Baseline Data
- Explain Procedures for Intervention
- Explain Premack's Principle

Definition/Overview:

Premack Principle: using a behavior of high probability to reinforce a behavior of lower probability.
**Average interval of in-seat behavior:** average (arithmetic mean) length of time a student is able to stay in seat without getting out of seat, e.g., 6-minute average in-seat interval.

**In-seat standard:** the length of time a student must remain in-seat in order to immediately earn out-of-seat time.

**Key Points:**

1. **Baseline Data**

   Baseline data involve calculating the average duration of in-seat behavior, i.e., dividing the number of times the student gets out of seat by the length of the instructional session. For example, a student gets out of his seat 10 times in a 80-minute session. The average interval length of in-seat behavior is 8 minutes (must put student back in seat immediately during baseline and implementation). Collect such data for 68 days in the target class period(s).

2. **Procedures for Intervention**

   - Purchase timing mechanism
   - Select class period(s) and student
   - Designate lengths of instructional sessions (try for some uniformity)
   - Collect baseline data for each student(s)
   - Select initial in-seat standard for each student
   - Inform the child that s/he must stay in the seat for the length of time denoted on oven timer to earn authorized out-of-seat time (provided s/he does not disrupt class during this time)
   - Set oven timer for in-seat standard and place on desk
   - If child gets up prior to timer, place him/her back in seat and reset timer for full length
   - If child achieves in-seat standard, praise and allow designated amount of out-of-seat time (usually a few minutes), repeat process
   - Progressively alter the in-seat standard with success across several consecutive days

3. **Premack’s Principle**

   "Premack’s Principle states that more probable behaviors will reinforce less probable behaviors. Premack's Principle was derived from a study of Cebus monkeys, but has explanatory and predictive power when applied to humans. This is evidenced by the fact that..."
therapists use the principle in behavior modification. In pedestrian terms Premack's Principle suggests that if a student wants to perform a given activity, the student will perform a less desirable activity to get at the more desirable activity. In behaviorist terms, activities become reinforcers. Students will be more motivated to perform a particular activity if they know that they will be able to partake of a more desirable activity as a consequence. If high probability behaviors (more desirable behaviors) are made contingent upon lower probability behaviors (less desirable behaviors), then the lower probability behaviors are more likely to occur. More desirable behaviors are those students spend more time doing if permitted; less desirable behaviors are those students spend less time doing when free to act.

This psychological principle can be used effectively in certain controllable situations to dramatically affect the behaviors of students.

In behavioural terms Premack's principle states that any high-frequency activity can be used as a reinforcer for any lower-frequency activity. This common statement made by most mothers easily show us how Premack's Principle is used "You have to finish your VEGETABLES (Low Frequency) before you can eat any ICECREAM (High Frequency)"

**Topic : Response Cards**

**Topic Objective:**

At the end of this topic student would be able to:

- Explain Procedures of Response Cards
- Explain Connecting People and Information to Improve Student Achievement
- Explain A Focus on the Student

**Definition/Overview:**

**Response Cards (RC):** An instructional management system to improve student attention and achievement
Key Points:

1. Procedures

- Identify the content or class period in which RC system is to be used
- Give each student dry erase board and dry erase pen or chalkboard and chalk for writing
- Design test items for each teachable chunk of material
- Present material, then enter practice condition
- Present short-answer questions, giving students signal to write then show
- Scan class answers, present correct answer to class
- If several students make errors, present item over again
- Continue asking additional questions until presentation has been adequately addressed

2. A Focus on the Student

Without the technology, the only common connecting element in education is the student. What if everything describing the student (demographics), everything the student does (learning), and everything illustrating what a student knows and is able to do (performance demonstrating learning) were connected? One student information system with the same naming conventions used for all aspects of a students tenure in a school district saves time and increases the accuracy of the data throughout the system. To illustrate, lets look at one student Emma, who is transferring from another district in the same state to see how this technology, just coming of age, will change the education system for her benefit.

When Emma enrolls in school, enrollment data about her is entered into a student information system one time. This is the last time this information needs to be entered. She is placed into a fourth-grade class, and her name and information is linked to the teacher, the grade, the school and the district. Emmas teacher sees her on the roster and in her gradebook instantaneously.

When in class the following week, Emma takes a math test online that is tied to the district and state standards. The results of the test are available to Emmas teacher, her principal and educators at the district office. So are the results of all fourth-grade students who took the test. The results can be disaggregated and analyzed in a variety of ways. Emmas teacher wants to know how each of her students is doing on each standard tested. Emmas principal is
piloting two different textbooks and wants to know if the results are different in those two classes. She also is interested in whether or not teachers who took the extended summer academy in smallgroup instruction are having different results from those who did not go to the academy. In the central office, the math curriculum coordinator is interested in the difference in results across campuses and across demographic groups. Emmas campus had particular problems with reading graphs, so the coordinator begins plans for appropriate professional development activities for the teachers.

The next day in class, Emma found out that she did very well on all standards except the one on fractions. Her teacher has scheduled 15 minutes a day for Emma to learn about fractions. She also e-mailed Emmas parents about resources they could use at home to address the performance gap. What is going on here is the power of connection among four key elements: an instruction system for the teacher, an assessment system, and a reporting system that can use disparate sources of information, all tied into a student information system using the same baseline student data. At the center is the student and the informed instructor in the classroom, but the students parents are kept up to date not only with information about how she is doing, but also with specific activities to help at home. Without the connection through the student information system, these activities would be overwhelming for a teacher to do with all of his or her students.

There is a suite of products now available to school districts which enable teachers and administrators to share this vision of connection today. Concert a Student Information, Assessment and Instruction Suite connects these four components so that data flows seamlessly among them to fulfill the vision we saw of Emma illustrated above. Concert takes its already powerful student information system and existing instructional management solution and ties that with an enhanced Web-based assessment system and data analysis tool for a solution tailored for enhancing student progress in this time of accountability.

3. Connecting People and Information to Improve Student Achievement

We live in a connected world. While this is a clich today, it was a revelation in 1979 when James Burkes Connections appeared on public television. It was an odd choice for a title in that 1979 was a comparatively unconnected age. The personal computer had been introduced several years earlier and names like Commodore PET and TRS-80 were populating science magazines. An information age was on the threshold. Connections offered a context and
direction to the changes taking place around us. We now live in the world Burke predicted. Burke’s idea states that when people, things or ideas come together in new ways, the rules of arithmetic are changed so that one plus one equals three. This is the fundamental mechanism of innovation. The result is always more than the sum of its parts. Every time there is an improvement in technology in which ideas and people come together, a major change ensues. The opportunity for the educational community to take advantage of this ensuing change now exists. Over the 30 or so years since technology related to students has been introduced into schools, the focus has been on managing student information on the administrative side and providing supplemental instruction to students. As technology has become more sophisticated and ubiquitous in schools, its use has spread throughout all facets of education. An early use of technology student information systems has become more common and highly robust in its power. The use of technology around instruction has changed dramatically with students using the Internet for research, making presentations using technology, etc. As standards-based instruction and the focus on accountability have grown over the last decade, technology’s role has grown in importance. Research surrounding high-performing schools shows that there are four important uses of technology in these schools:

- A student information system to store and manage data connected to students.
- An instructional management system to assist teachers with record keeping, such as attendance and gradebooks, as well as manage resources for instruction.
- A student assessment program with test creation and reporting capabilities.
- A data management/data analysis tool to help teachers and administrators use data coming from disparate assessments.

The final two components are relatively new, but critically important as schools try to fully understand what students know and are able to do during the school year. In most districts, however, none of the four functions are connected to each other. In other words, the attendance does not talk to the gradebook nor does it talk to tests. These typically are isolated experiences and neither the experiences nor the data produced by them are connected to each other. One result of this lack of connectivity is that data must be re-entered into systems, sometimes daily. This takes the time of the clerk in a district office, a teacher and/or a guidance counselor. It also offers the opportunity to introduce errors either through typographical mistakes or different naming conventions. For example, Deborah, when enrolling, becomes Debbie in the classroom; Jim E. Smith becomes Jimmy Smith.
addition, important data such as past attendance could provide valuable information to a teacher about specific students.

An important, yet subtle, factor about technology as it has been used more in schools is its impact on the vision of a school district. Most districts have one or more components of the four noted above. When the educators in those high-performing schools see all the parts connected and working together, their vision for technology becomes clearer. More important, their vision for increasing student achievement for individual students as well as entire schools becomes more focused. They see more accurate and consistent data about students, and clear displays of a vast array of data that they can turn into specific action in the classroom tomorrow.