

Developing & Implementing Appropriate Functional Behavior Assessments (FBA)

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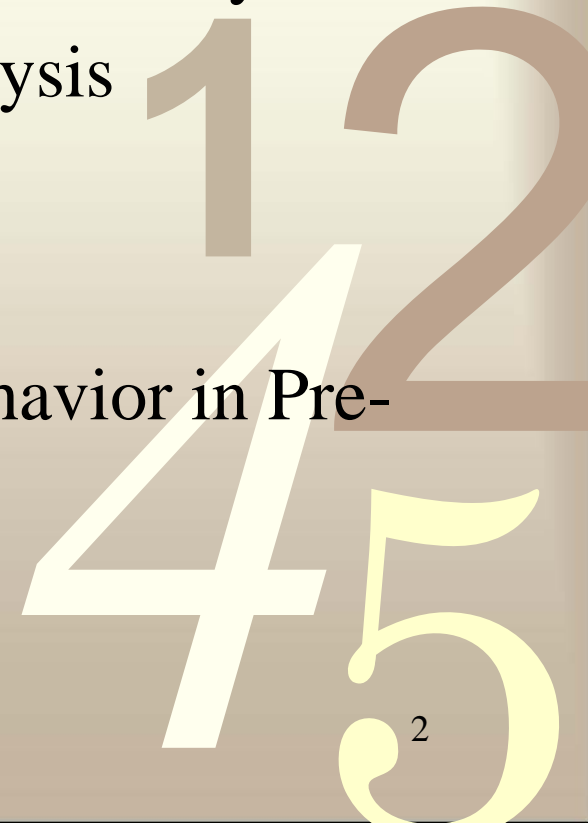


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Overview of Training

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- Overview of Behavior Interventions & Analysis
- Overview of Applied Behavior Analysis
- Purposes of FBAs & BIPs
- Conducting a Comprehensive FBA
- Practice: Observation of Student Behavior in Pre-School



Overview of Behavior Interventions & Analysis

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- Behavior Intervention Theories
 - Behavior Control
 - Behavior Modification
 - Cognitive Behavior Management/Modification
 - Applied Behavior Analysis



Overview of Behavior Interventions & Analysis

Behavior Intervention Theories

- Behavior Control

- Description:

- Primary use for behavior crises (emergency management)

- Typical strategy used is not working or it is a new and unpredictable behavior problem
- Situation is out of control
- Unless something is done immediately, situation will likely escalate to crisis (may cause great harm to individuals or self)

- Limitations:

- Whatever you do in that situation will only stop the behavior for that moment and location.
- Method does not analyze function of behavior
- Does not teach behavior change – the same behavior could/will occur again in similar situation

Overview of Behavior Interventions & Analysis

Behavior Intervention Theories

- Behavior Modification

- Description:

- Used with behaviors occurring at low rates
 - Behavior is clearly defined
 - Consequences are delivered contingent upon occurrence of pre-defined behavior
 - Sometimes designates alternative & appropriate behaviors to be reinforced (in place of targeted inappropriate behavior)

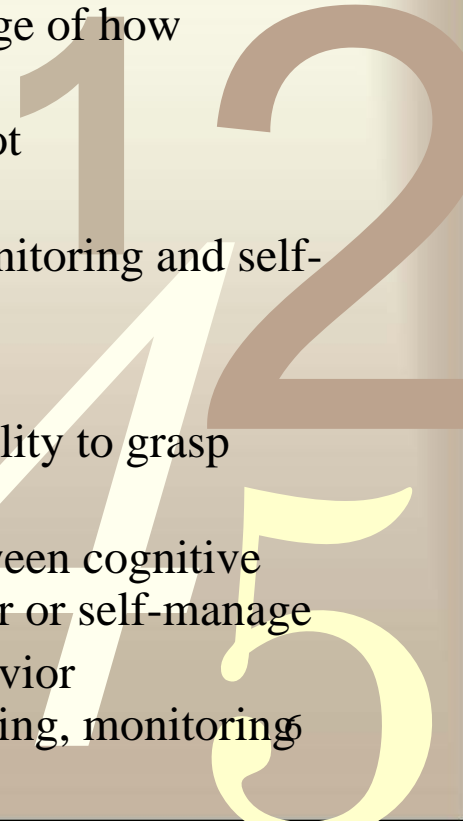
- Limitations:

- Have to wait for behavior to occur – no analysis of function of behavior and determination of antecedents and methods to prevent behavior
 - Intervention strategies are typically generic

Overview of Behavior Interventions & Analysis

Behavior Intervention Theories

- Cognitive Behavior Management/Modification
 - Description:
 - Use of specific techniques designed to teach self-control through increased awareness of cognitive processes and knowledge of how behavior affects outcomes
 - Emphasis is on the student evaluation of performance (not therapist/teacher)
 - Involves observational learning, self-instruction, self-monitoring and self-management.
 - Limitations:
 - Many students are too young or have too severe of disability to grasp understanding of cognitive connection to behavior
 - Many students, while able to discuss the connection between cognitive processes/choices and behavior are unable to self-monitor or self-manage
 - Even if a student is able to effectively use cognitive behavior management, will almost always still need external teaching, monitoring and management



Overview of Behavior Interventions & Analysis

Behavior Intervention Theories

- Applied Behavior Analysis (FBA & BIP)
 - Description:
 - Is proactive, preventative, & reactive - focus is on antecedent intervention
 - Comprehensive analysis of function of targeted behaviors
 - Includes extensive use and integrative application of data
 - Teaches the child alternative and appropriate behaviors - results in lasting behavior change
 - Limitations:
 - Method does not utilize cognitive behavior intervention strategies (i.e. problem solving, self-esteem)
 - Method is often viewed as being very “clinical” and therefore not easily generalizable across settings

Overview of Behavior Interventions & Analysis

Applied Behavior Analysis (ABA)

- A-B-C Paradigm

- The three-term contingency: All applied behavior analysis procedures involve manipulation of one or more components of this three-term contingency.

A - B - C

Antecedent

The antecedent is the specific [stimulus] condition under which the behavior occurred.

Behavior

The behavior that occurs in response to the antecedent.

Consequence

The response that follows a behavior and affects the likelihood that it will occur again in the future. Consequences can increase behavior (**reinforcement**) or decrease behavior (**punishment**).

Overview of Behavior Interventions & Analysis

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Applied Behavior Analysis

- The ABC Paradigm is a system of analyzing the cause and effect of behavior by recording the Antecedent, Behavior, and Consequence of each occurrence.
- Examples:
 - 1) A- “What is her name?”; B- “Joanne.”; C- “Thanks.”
 - 2) A- [Loud noise]; B- [student screams]; C- “Be quiet!”
 - 3) A- “Time to clean up your toys.”; B- “NO!!” [throws toy]; C- [teacher ignores student and puts a frown face next to clean-up time on student’s chart]

Overview of Behavior Interventions & Analysis

Applied Behavior Analysis (ABA)

- A-B-C Paradigm also incorporates analyzing and determining the *setting event* in which a behavior occurs.
 - A setting event is the environment (i.e. bus, playground, bathroom), ecological event (i.e. lack of sleep, medication), or activity (i.e. math time, playing with Legos) that sets up an antecedent to trigger the occurrence of a behavior.
 - Example:
 - 1) SE – [target student is on the bus for over 15 minutes]; A – [another student sits in front of target student]; B – [target student hits other student on the head]; C – [other student screams and moves to different seat, bus driver demands that student can no longer ride bus]

Overview of Behavior Interventions & Analysis

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- Analysis of Behavior
 - Attempt to provide operational description
 - Attempt to determine function
 - Attempt to predict occurrence

NOTE: All behavior occurs as a result of the individual being *motivated* to gain or avoid something or someone.

Overview of Behavior Interventions & Analysis

Analysis of Behavior

- Attempt to provide operational description
 - Need to describe the behavior in the following ways:
 - Topography: what does it look like
 - Frequency: how often it occurs
 - Duration: how long it occurs
 - Intensity: how strong it is

Overview of Behavior Interventions & Analysis

Analysis of Behavior

- Attempt to determine function
 - Need to determine the purpose for the display of the behavior in the following ways:
 - What consequence(s) is maintaining/sustaining the behavior (if a behavior continues to occur, it is being reinforced)
 - What is the student gaining or avoiding by engaging in the behavior

Overview of Behavior Interventions & Analysis

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Analysis of Behavior

- Attempt to predict occurrence
 - Need to predict with whom, when and where the behavior will likely occur or not occur:
 - Identify who and what settings that consistently trigger behavior (setting events & antecedents)
 - Identify who and what settings in which the behavior does not occur
 - Clarify when the behavior occurs within those settings

Purpose of FBA & BIP

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- Theory of FBA & BIP:
 - Overview of FBA & BIP components
 - Deciding on type of FBA & BIP for different students & behaviors (spectrum of purposes and plans)
 - Review functions of behaviors

Purpose of FBA & BIP

Overview of FBA & BIP Components*

- Functional Behavior Assessment
 - Purpose:
 - To document the structure and function of target inappropriate behavior(s) with the goal of developing lasting & alternative appropriate behaviors.
 - Components:
 - Reason for referral & Student's current abilities and challenges
 - Method of assessment
 - Operational description of problem behavior(s)
 - Potential setting events in which behavior(s) occurs
 - Antecedent events which cause behavior(s) to occur
 - History of target behavior(s) and interventions
 - Hypothesized function of the behavior(s)
 - Potential functional alternative behavior(s) to replace problem behavior(s)
 - Potential reinforcers to be used with the student
 - Recommendations for BIP

Purpose of FBA & BIP

Overview of FBA & BIP Components

- Behavior Intervention Plan
 - Purpose: To provide a description of the intervention procedures that will decrease target inappropriate behaviors and increase appropriate alternative behaviors.
 - Components:
 - Purpose of BIP
 - Target problem behavior(s)
 - Definition of behavior(s)
 - Antecedents & Setting Events
 - Function of behavior(s)
 - Interventions:
 - Setting Event & Antecedent
 - Replacement behaviors
 - Consequence
 - Data collection
 - Other: specific staff involvement, training for staff, follow-up plans & meetings¹⁷



Purpose of FBA & BIP

Different Types of FBAs & BIPs

- Consider a spectrum of functional analysis and behavior intervention – based on need and severity of behavior
- Types of Behavior Plans*
 - Prevention Behavior Plan
 - Standard Behavior Plan
 - Specified Behavior Plan
 - Comprehensive Behavior Plan
 - Formal Behavior Plan (legal considerations)
- Sometimes FBA information and BIP in one brief report

Purpose of FBA & BIP

Functions of Behavior

- All challenging behavior is functional – it would not occur if it did not serve some purpose.
- Behavior communicates needs and serves to get those needs met.
- Two main categories of functions of behavior:
 1. Obtain desirable events/items
 - Internal stimulation (automatic reinforcement)
 - Endorphins release – proprioceptive
 - External stimulation
 - Attention (social, physical, visual, surprise)
 - Objects
 - Activities

Purpose of FBA & BIP

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Functions of Behavior

2. Avoid/Escape undesirable events

- Internal stimulation (automatic reinforcement)
 - Headaches, sound, hunger, thirst, internal pain, tactile irritation
- External stimulation
 - Attention
 - Tasks (too difficult, too easy, repetitive)
 - Events (undesirable, change in routine)
- There can be more than one function for a behavior – need to address all functions or behavior will not decrease (i.e. avoid/attention)

Conducting a Comprehensive FBA

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- Functional Behavior Assessment Process:
 - Initial team meeting
 - Student Problem Behavior Review
 - Data collection
 - Target behavior
 - Systematic manipulations
 - Determining the function of behaviors
 - Writing an FBA report

Conducting a Comprehensive FBA

Initial Team Meeting

- Student Problem Behavior Review*
 - 60 minute meeting
 - Identify facilitator (behavior specialist) and recorder
 - Discuss and record team's experience with and understanding of the student and his/her problem behavior and surrounding circumstances
 - Plan the necessary next steps:
 - Complete a FBA?
 - Talk with other relevant persons?
 - More data collection?
 - Systematic manipulations?
 - When need to meet again?

Student Problem Behavior Review

Student: _____

Date: _____

Review Team: _____

Setting Events	Antecedents	Problem Behavior(s)	Perceived Function(s)	Actual/Current Consequences
<p><i>First ten minutes of first classroom activity after any recess. Peers and T are sitting at desks or on the floor.</i></p>	<p><i>Teacher giving general instructions about activity.</i></p>	<p><i>T talks loudly to peers sitting near him about the game they played at recess or about his favorite football team.</i></p>	<p><i>T is having a difficult time transitioning from preferred activity, ending it and settling down to listening quietly to teacher. Wants to continue the fun he was having and interacting with peers.</i></p>	<p><i>Teacher or paraeducator remind him that he needs to be listening to the teacher quietly and that recess is over. One of them tells him to go take a quiet time at the isolated desk at that back of the class for about 2-5 minutes.</i></p>

Perceived Overall Functions:

T is having a difficult time transitioning from preferred activity, ending it and settling down to listening quietly to teacher. Wants to continue the fun he was having and interacting with peers.

Overall: 1) T really wants to make friends and is learning, through social skills instruction how to play games with his peers and how to talk about your favorite things with your friends. He is improving greatly at recess with playing with his peers and they are showing more interest in playing with him. 2) T. has frequently shown difficulty in transitioning from preferred to non-preferred activities.

Prediction of occurrence:

The current consequence of separating T from his peers for a short-time and having him be quiet does work eventually after 2-5 minutes and T. is typically able to rejoin the class activity and listen quietly to the teacher. But, this consequence is not decreasing the occurrence of the behavior. Upon review of the A-B-C data, it appears that the behavior is increasing and the team thinks this is due to the fact that he is learning more social interaction skills and the quality and quantity of his interactions with his peers are increasing and improving. He is very happy and talks a lot about his friends. The team believes this behavior will increase unless we can address both his difficulty of transitioning to non-preferred activities and his wanting to continue interactions with his peers after playing for a while with them.

Next Steps (data collection, systematic manipulations, etc.):

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Data Collection

- Determining Priorities
 - What behavior is causing the greatest threat to the current placement
 - What behavior, if changed, would provide the greatest access to social reinforcement
 - What behavior, if changed, may positively affect change in other inappropriate behaviors

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Data Collection

- Properties of Behavior
 - Frequency – how often
 - Duration – how long
 - Intensity – how much
 - Latency – how long until behavior occurs
- Determine what property needs most to be changed.
- Track as many salient properties as possible.

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Data Collection

- Methods of Data Collection
 - Interviews with relevant persons (*see FAI)
 - Instructors and parents (maybe student)
 - Direct observation and recording (frequency, rate, duration, latency)
 - ABC data (narrative and checklist)
 - Percent Occurrence
 - Record how often occurs out of how many opportunities it could occur
 - Interval/Time Sample (will not catch every instance)
 - Partial interval – did it occur at all
 - Whole interval – did it occur for the whole interval
 - Momentary time sample – check for behavior occurrence at certain times and make tally mark or check Yes/No

See example data sheets*

A-B-C Data Analysis

Student: _____

Location: _____

Date/ Time	Setting Event	Antecedent	Behavior	Consequence	Comments	Staff
02.20.08 1:36pm	<i>Math lesson lecture by teacher. Students looking at worksheet while teacher doing examples on whiteboard. Some examples had the number 5 in the equations.</i>	<i>Teacher walked by K's desk and said quietly to K. "you need to look up at the board."</i>	<i>K. yelled "I don't like fives!!!" and slumped in his chair.</i>	<i>Teacher ignored K. and paraeducator (without saying anything or looking at K) put a check mark next to <u>Need to listen quietly</u> on his behavior monitoring sheet.</i>	<i>After a minute or two, teacher asked K. "what is 2+6, K.?" from front of class and he answered "eight." Teacher said, "that's right, good job, K." K. smiled</i>	S.A.
02.21.08 10:20am	<i>Reading groups of 4 kids working at different stations throughout rooms. 2 groups have a teacher and two groups working independently. Change every 20 minutes. K is with group doing independent worksheets. K is drawing on his paper.</i>	<i>Paraeducator (helping another child at another table) said to K. "K, you need to finish your worksheet, when you're done you can draw."</i>	<i>K. slammed pencil down on top of paper and looked at paraeducator.</i>	<i>Paraeducator says to K in monotone voice "go for 1 minute to the quiet square". K walked to square and sat down. Paraeducator set timer for 1 minute.</i>	<i>After timer went off, K went back to his desk and started working on his worksheet. After a couple of minutes, paraeducator praised him for "good working" and put a check mark next to <u>Good job working quietly</u> on his behavior sheet.</i>	S.A.

Time Sample: Interval

Student: Andy **Activity:** Free Choice Play Time

Replacement Behavior(s): Engaged in play with toys as designed – building blocks, rolling cars, and banging on drums

Problem Behavior(s): Engaged in self-stimulatory behaviors – flicking fingers in front of eyes, rocking body back and forth and humming, rubbing palms on thighs

Time Sample: 10:00 – 10:30am **Date:** 10.23.08

<i>Target Behavior</i>		<i>Problem Behavior</i>	
<i>Time Interval</i>	<i>Comments</i>	<i>Time Interval</i>	<i>Comments</i>
10:02-10:04 (2min)	Rolled cars and banged them into blocks (no pretend noises)	10:00-10:02 (2min)	Flicking fingers in front of eyes with head tilted sideways
10:08-10:12 (4min)	Lined up for long blocks and then put short blocks on top (three stories high)	10:04-10:08 (4min)	Flicking fingers in front of eyes and then rocking and humming
10:17-10:23 (6min)	Knocked down block tower and lined up a long row of blocks, then drove car on the row of blocks	10:12-10:17 (5min)	Rubbing palms on thighs and then flicking fingers in front of eyes
10:25-10:30 (5min)	Rolled cars around between the scattered blocks	10:23-10:25 (2min)	Rocking and humming

Frequency Data Sheet

Student: _____

Date/Initials	Behavior	Time Period	# Incidents	Comments
03.14.08 D.S.	<i>Flapping left hand (non-dominant hand) next to side of head during independent work periods.</i>	10:05-10:20am	//// // //	<i>Working on reading worksheet. Each incident is about 4-6 flaps and then he goes back to work.</i>
03.14. 08 D.S.	<i>Flapping both hands at sides of head during instruction period.</i>	10:30-10:50am	//// //	<i>Teacher providing instruction regarding art activity. Kids sitting at desks. Each incident is about 3-5 flaps.</i>

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Data Collection

- Methods of Data Collection
 - Response/Permanent Products
 - Homework sheets
 - Token economy charts
 - Crisis intervention reports (intensity of impact)
 - Trials to Criterion
 - How many times/days of training/teaching until the student obtained correct behavior

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Data Collection

- Methods of Data Collection
 - The method you choose depends on:
 - Who is taking data
 - What properties of the behavior are important
 - Whether you are doing a functional analysis or monitoring the implementation of a behavior plan
 - Whether your goal is to increase or decrease the behavior

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Data Collection

- Monitoring Data Collection
 - Set up a system and monitoring schedule to ensure accuracy and to promote correct data collection
 - Pick specific and feasible times to collect data
 - Determine appropriate person(s) for taking data
 - Make collection process/data sheet as simple as possible
 - Use permanent products when possible
 - Ensure that definition is accurate, objective, and sufficiently inclusive or exclusive
 - Provide feedback on reliability
 - Involve teacher and allow him/her to have some control over who and when data is taken

Conducting a Comprehensive FBA

Determining Function of Behavior

- Setting Event & Antecedent Factors (Prediction)
 - Setting Events
 - Medical issues
 - Daily routines, activities, and schedules
 - Staffing patterns
 - Choice and control
 - Sensory stimulation
 - Antecedents
 - Time of day
 - Exact setting (location, academic event)
 - Social interactions
 - Activity
 - Instruction type and style

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Determining the Function of Behavior

- Setting Event & Antecedent Manipulation
 - Setting Variables to Manipulate
 - Home events/schedule
 - Specific routines
 - Arrangement of classroom
 - Time of day (morning/afternoon, class period)
 - Time in schedule (prior to/ after)
 - Number of students/adults in room
 - Sensory distractions/irritants (light, heat, noise, etc.)

Conducting a Comprehensive FBA

Determining the Function of Behavior

- Setting Event & Antecedent Manipulation
 - Instructional Variables to Manipulate
 - Difficulty of instruction (abstractness, developmental level, prerequisite skills, amount)
 - Functionality of task
 - Interest in task
 - Tone of voice used
 - Length of time before reinforcement (instruction or task)
 - Length of time spent on task
 - Group vs. individual instruction
 - Prompting/modeling provided
 - Availability of choice
 - Availability of reinforcers

Conducting a Comprehensive FBA

Determining the Function of Behavior

- Why is the Behavior a Problem?
 - Excess
 - Deficit
- Analyze Data to Develop Hypothesis
 - Goals:
 - 1) to choose interventions for the problem behavior *based on its probable function and the factors contributing to behavior*
 - 2) to be able to train an appropriate replacement behavior that serves the same function
 - Access or Avoid

Conducting a Comprehensive FBA

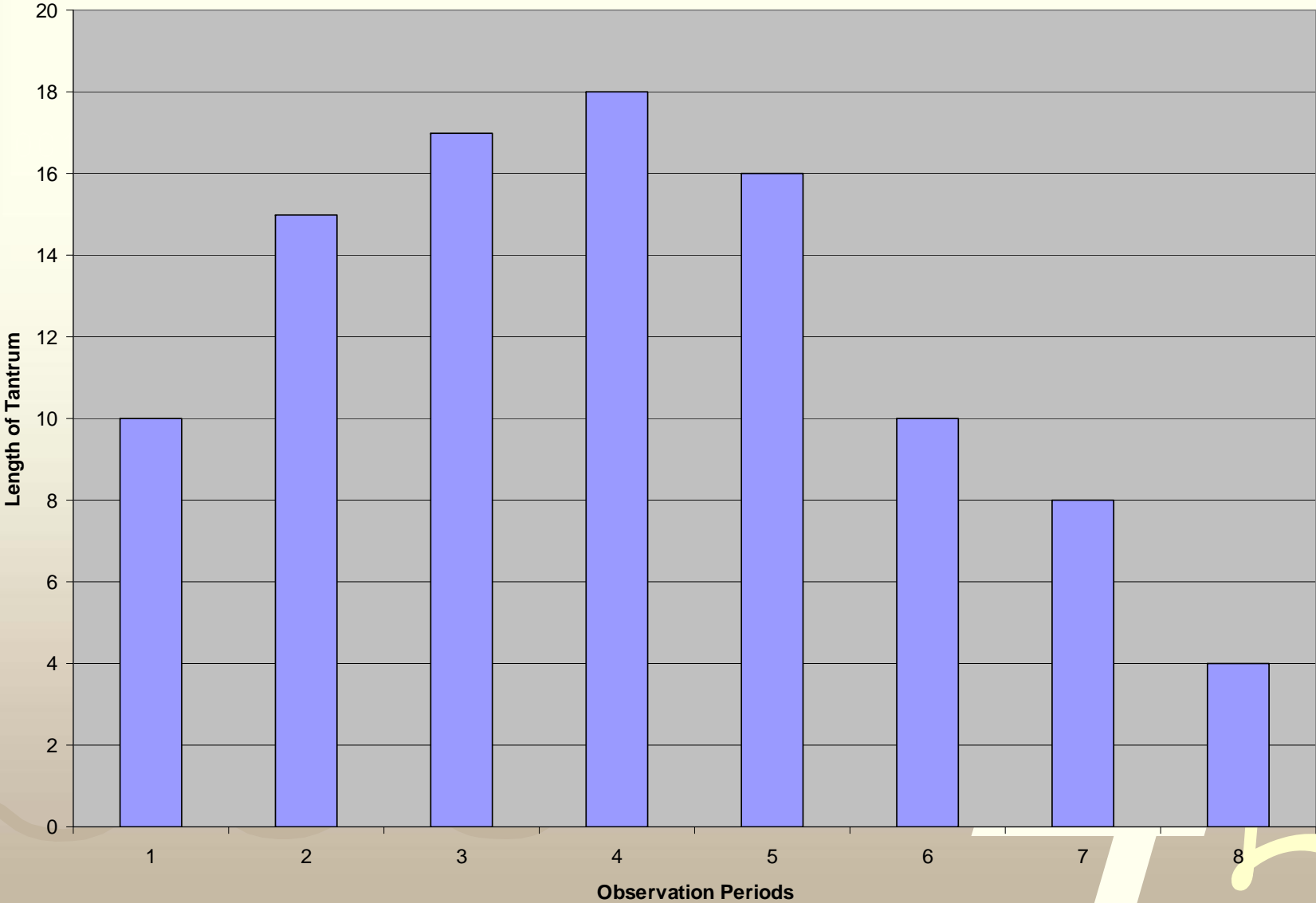
Determining the Function of Behavior

- Summarizing Data
 - Graphing
 - Graphing is suitable for:
 - Frequency,
 - Rate,
 - Duration, and
 - Time sample data

See examples graphs

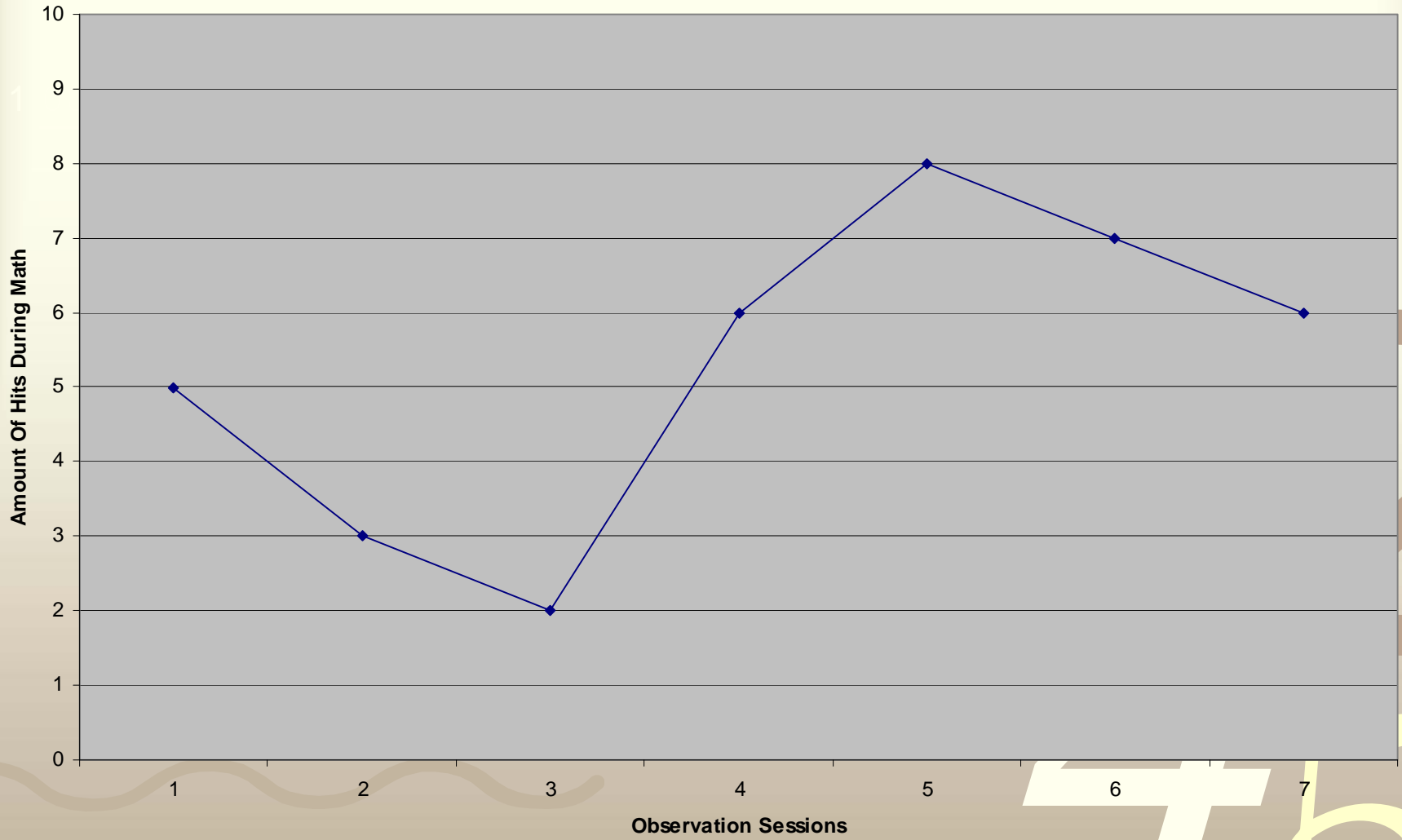


Example Duration Graph

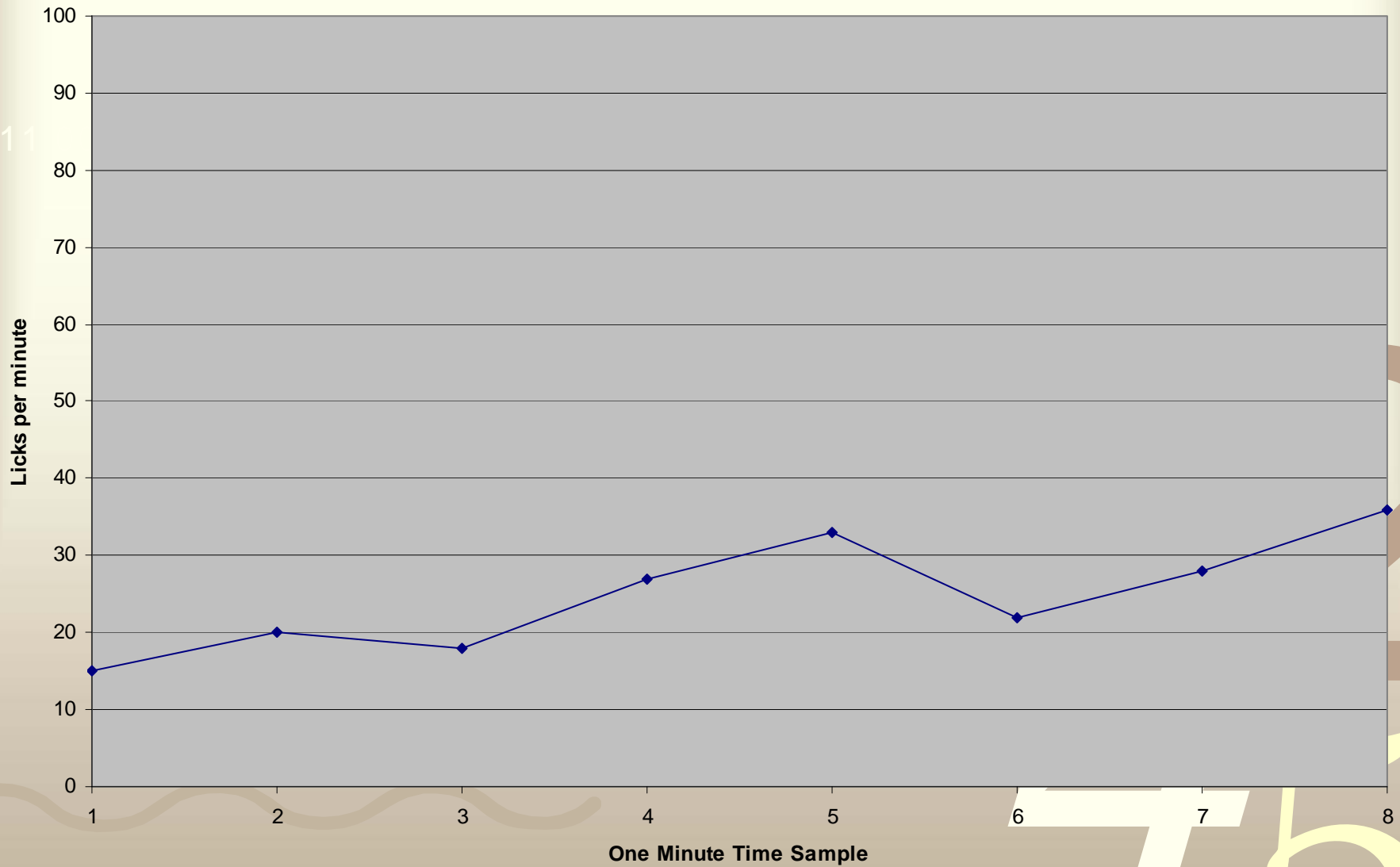


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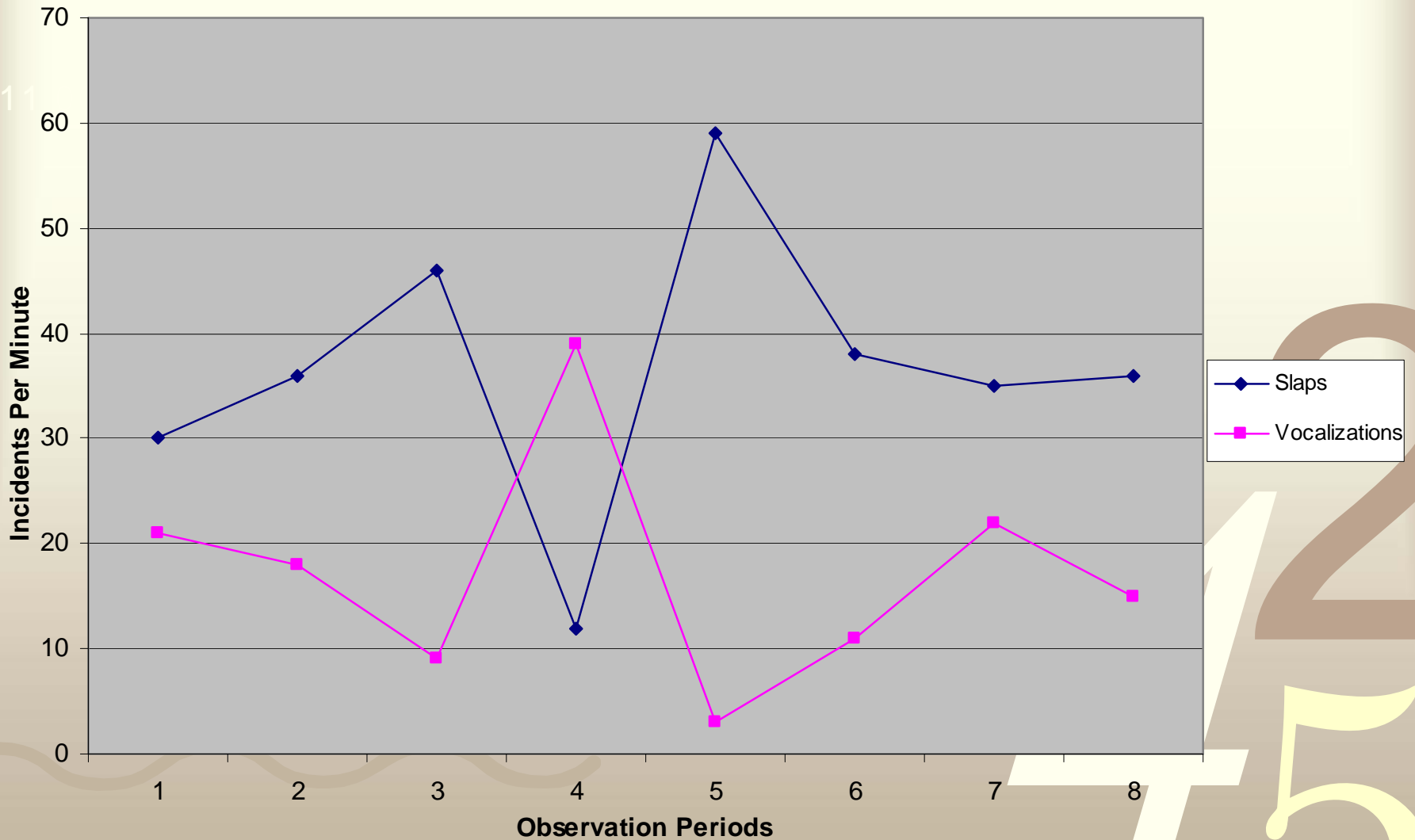
Example Frequency Graph



Example Rate Graph

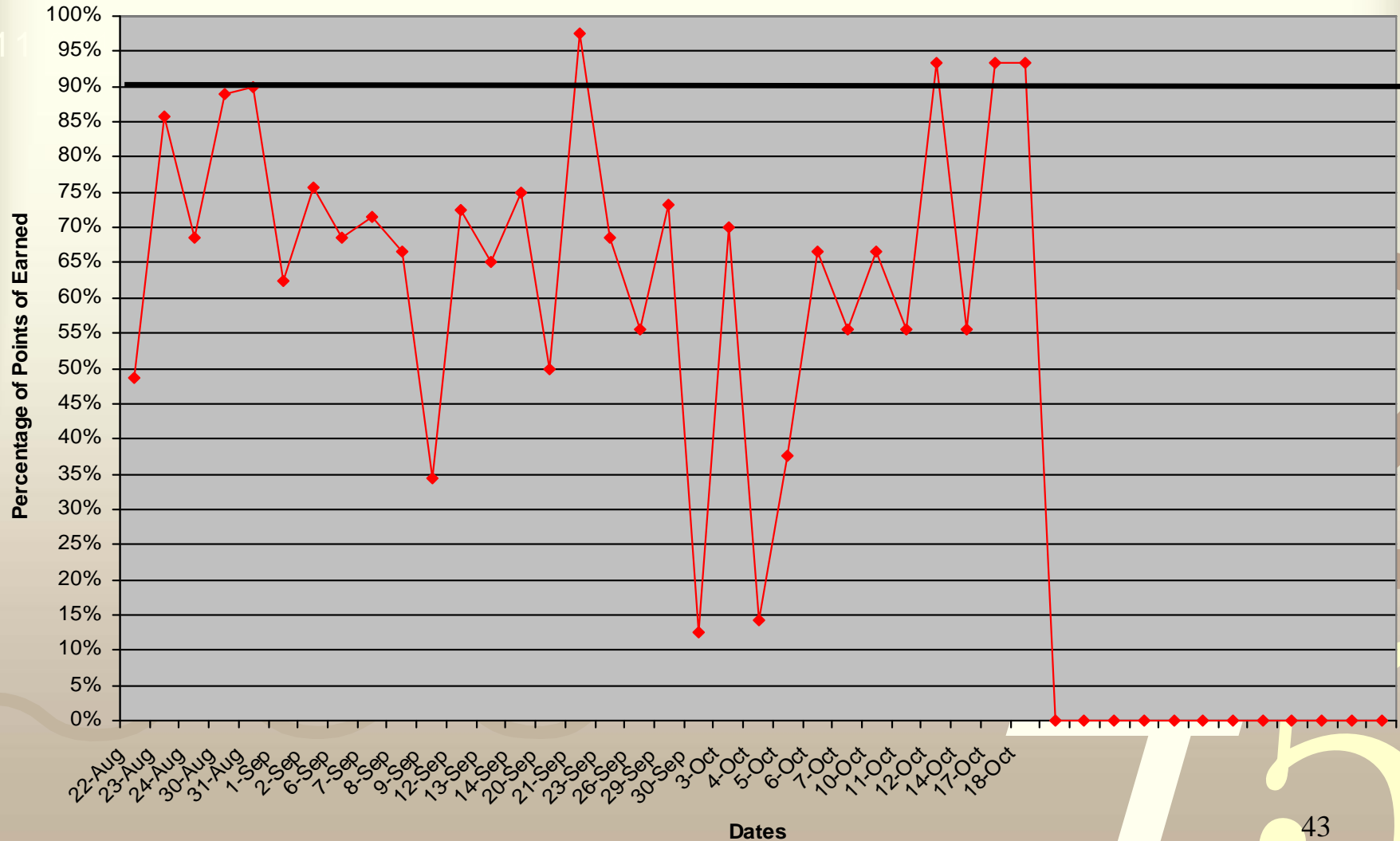


Example of Combined Data - Rate Graph



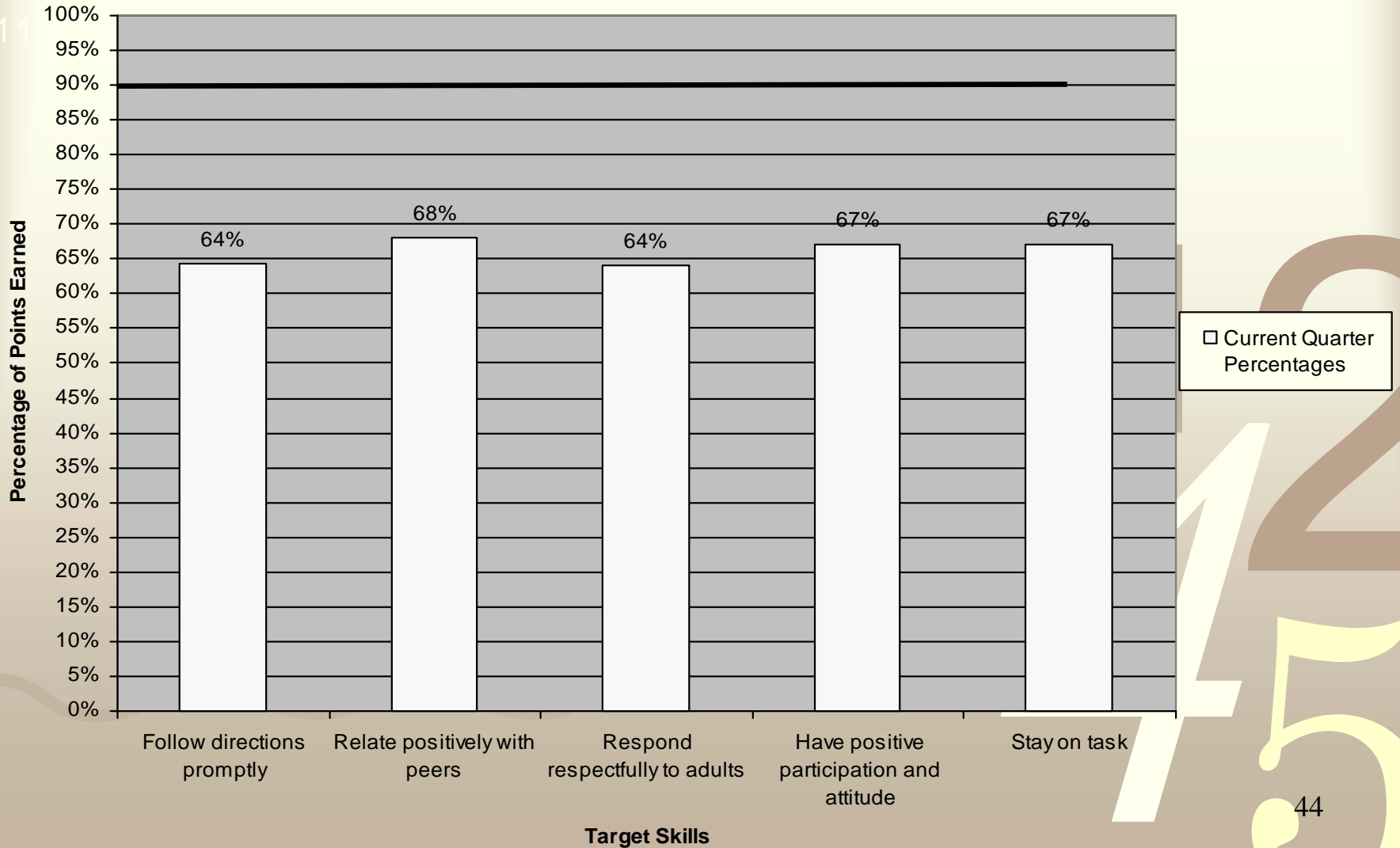
Example: Time Sample Data

Point Card Percentages



Example: Time Sample Data

Target Skills Percentages



Conducting a Comprehensive FBA

Determining the Function of Behavior

- Identifying Functional Replacement Behaviors
 - Need to find appropriate replacement behaviors that serves the same function and are more efficient than the problem behavior.
 - Things to consider – replacement behavior:
 - is incompatible with problem behavior
 - currently occurs at a low rate
 - will prove to be more functional and socially rewarding
 - is something the student has the ability to perform
 - enables the student to participate more (or better quality) in LRE
 - During period of systematic manipulation you are also testing and beginning to teach replacement behaviors

Conducting a Comprehensive FBA

Writing a Comprehensive FBA

- Functional Behavior Assessment
 - Purpose:
 - To document the structure and function of target inappropriate behavior(s) with the goal of developing lasting & alternative appropriate behaviors
 - Components:
 - *Reason for referral & Student's current abilities and challenges*
 - *Method of assessment*
 - *Operational description of behavior*
 - *Potential setting events* in which behavior occurs
 - *Antecedent events* which cause behavior to occur
 - *History of target behavior and interventions*
 - *Hypothesized function of the behavior*
 - *Potential functional alternative behaviors* to replace target behavior
 - *Potential reinforcers* to be used with the student
 - *Recommendations* for BIP

Conducting a Comprehensive FBA

Writing a Comprehensive FBA

- Functional Behavior Assessment
 - Need to condense and summarize information so that anyone can understand it – (terms, acronyms, data analysis, etc.)
 - All data and interview forms and notes are for the student file – you describe and summarize results for the report*
 - Graphs are important for meetings – show the picture/pattern of what is happening over time – very helpful for parents
 - Provide FBA report to team members prior to meeting*
 - Hold a team meeting to discuss FBA report

Conducting a Comprehensive FBA

FBA Team Meeting

- The purpose of the FBA meeting:
 - Explain & discuss the FBA process - interviews, observations, data collection, systematic manipulations
 - Provide a BRIEF summarization of the report
 - Ask for questions - use your data sheets, interview notes and graphs if needed to provide answers
 - Discuss recommendations - interventions for target behavior(s), possible staff to be involved in implementation, and training needed for staff
 - Outline plan for BIP

Practice

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- Observation of student behavior in pre-school
 - Choose one student demonstrating a problem behavior
 - Use a data sheet or create own data, to record occurrences
- Individual/Group work
 - Define target behavior
 - Explain perceived function
 - Explain possible replacement behaviors
 - Discuss what more data you need and plan for possible intervention strategies

