A Component Analysis of Feedback

Denice Rios, Meline Pogosjana, Candice Hansard, & Ellie Kazemi
California State University, Northridge
ABAI 2014
Chicago, IL

Efficient Training Strategies

- Shapiro et al. (2014)
  - 6/8 participants
    - Self-instructional package
  - 2/8 participants
    - Self-instructional package + feedback

Efficient Training Strategies

- Shapiro et al. (2014)
  - 6/8 participants
    - Self-instructional package
  - 2/8 participants
    - Self-instructional package + feedback
- Roscoe & Fisher (2008)
  - Trained 8 behavioral technicians
    - Single feedback session
      - Review video and data sheet
      - Corrective feedback
      - Role play

Efficient Training Strategies

- Shapiro et al. (2014)
  - 6/8 participants
    - Self-instructional package
  - 2/8 participants
    - Self-instructional package + feedback
- Roscoe & Fisher (2008)
  - Trained 8 behavioral technicians
    - Our feedback package
      - Review data sheet
      - Corrective feedback
      - Model + strategy

Feedback Limitations

- Trained professional still required

Feedback Limitations

- Trained professional still required
- May not be practical in applied setting
  - Interrupt client sessions

Feedback Limitations

- Trained professional still required
- May not be practical in applied setting
  - Interrupt client sessions
- Identify
  - Most efficient
  - Least intrusive

Feedback Packages

- Balcazar et al., (1985); Alvero et al., (2001)
  - No conclusions regarding effects of specific components

Feedback Packages

- Balcazar et al. (1985); Alvero et al. (2001)
  - No conclusions regarding effects of specific components
- Few experimental evaluations
  - Johnson (2013)
    - Objective vs. Evaluative
      - Both needed for maximum gains
- Still need to identifying least intrusive, effective components

Objective

- Additive component analysis to identify
  - Least intrusive, effective component
- Most efficient procedure when a self-instructional package is not sufficient

Method

- Design
  - Multiple baseline across participants
- Target behavior
  - Percentage correct implementation
    - Paired-stimulus (PS) preference assessment
- Mastery criteria
    - 90% or above across 2 consecutive sessions

Method

- Participants
  - 6 undergraduate students
  - No formal training
- Setting
  - Observation rooms with two-way mirrors

Reliability

- Independent observers
  - In-vivo
  - Videotaped sessions
- Response measurement
  - Total accuracy
  - Target responses

Procedure

- Baseline
  - Written instructions
- Self-Instructional Package
  - Enhanced written instructions
- Feedback
  - FB1 = rubric
  - FB2 = rubric + performance
  - FB3 = rubric + performance + model/strategy
- Feedback delivered immediately prior to next session

FBI

Dependent Variable	Operational Definition
1. Stimulus presentation	Placed two items on the table in front of the consumer
2. Stimulus placement	Placed the two items 1ft in front of consumer and 1 ft apart
3. Postselection response	Removed the unselected item before recording data
4. Response blocking	Blocked approaches to more than one item or an item that that is not in your pool of items by reaching your hands out to the consumer's hands
5. Trial termination	Ended the trial if the consumer did not select an item within 5 seconds after you delivered the verbal prompt

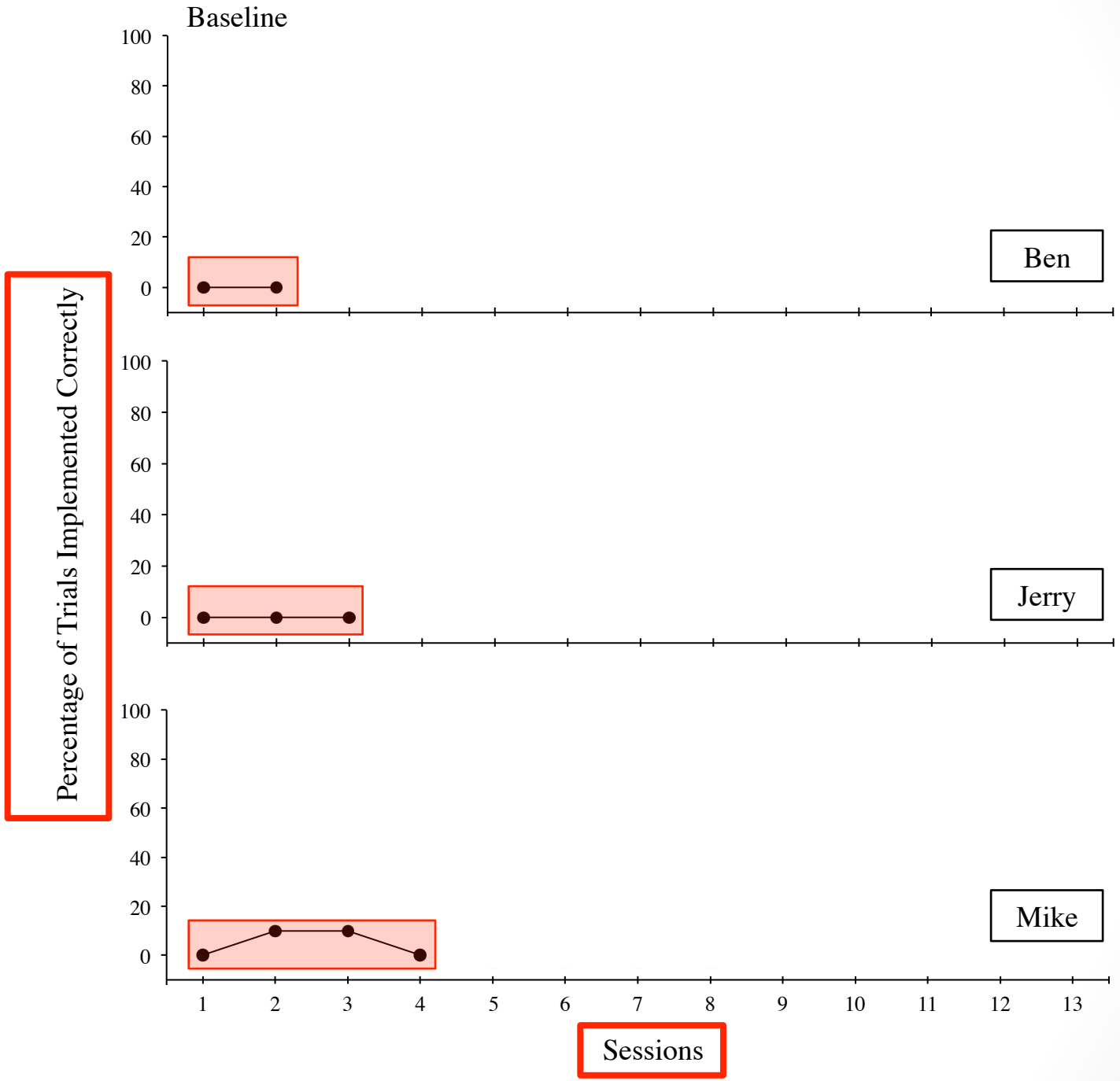
FB2

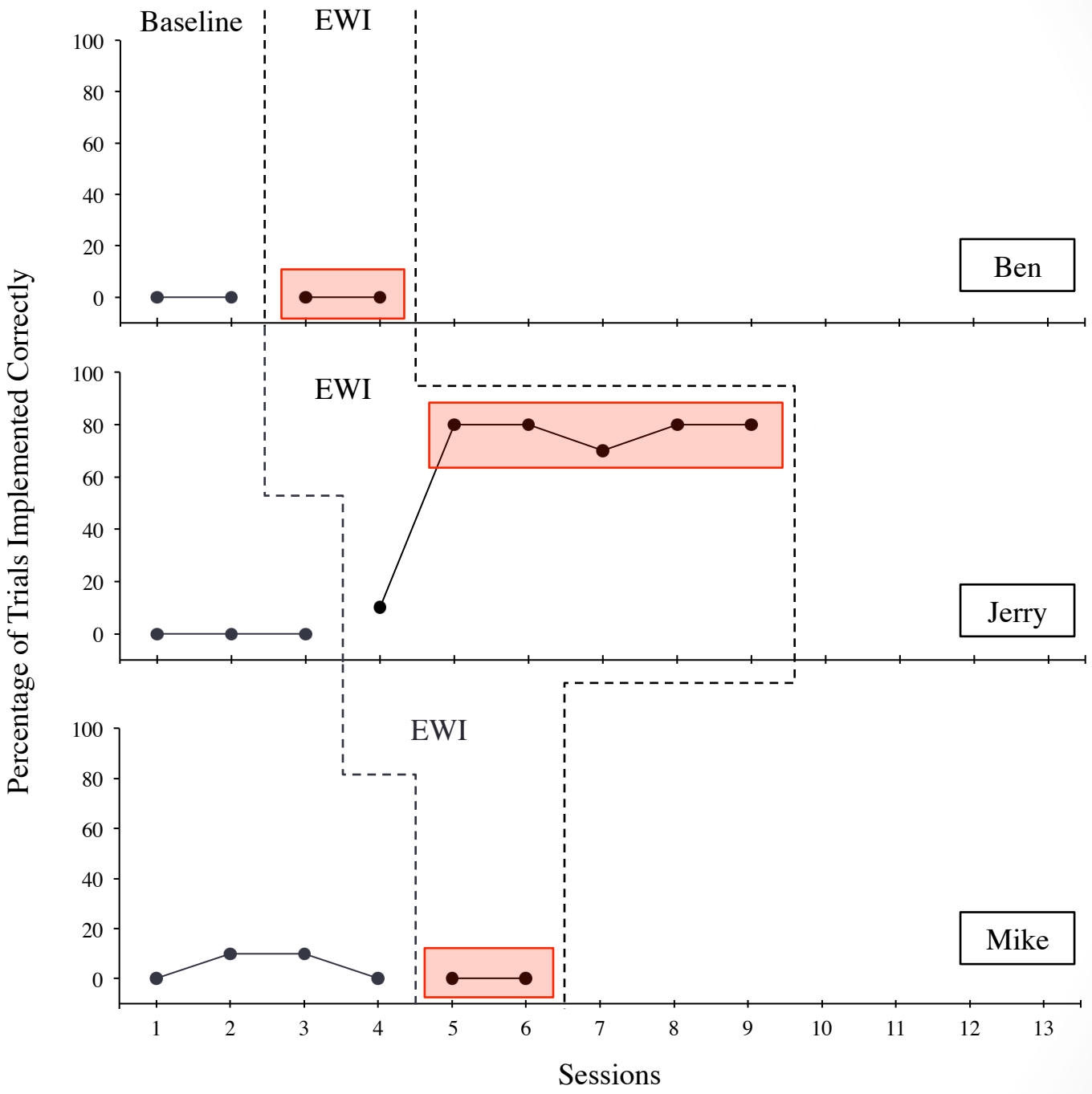
Dependent Variable	Operational Definition	Correct
1. Stimulus presentation	Placed two items on the table in front of the consumer	Yes
2. Stimulus placement	Placed the two items 1ft in front of consumer and 1 ft apart	No
3. Postselection response	Removed the unselected item before recording data	No
4. Response blocking	Blocked approaches to more than one item or an item that that is not in your pool of items by reaching your hands out to the consumer's hands	No
5. Trial termination	Ended the trial if the consumer did not select an item within 5 seconds after you delivered the verbal prompt	No

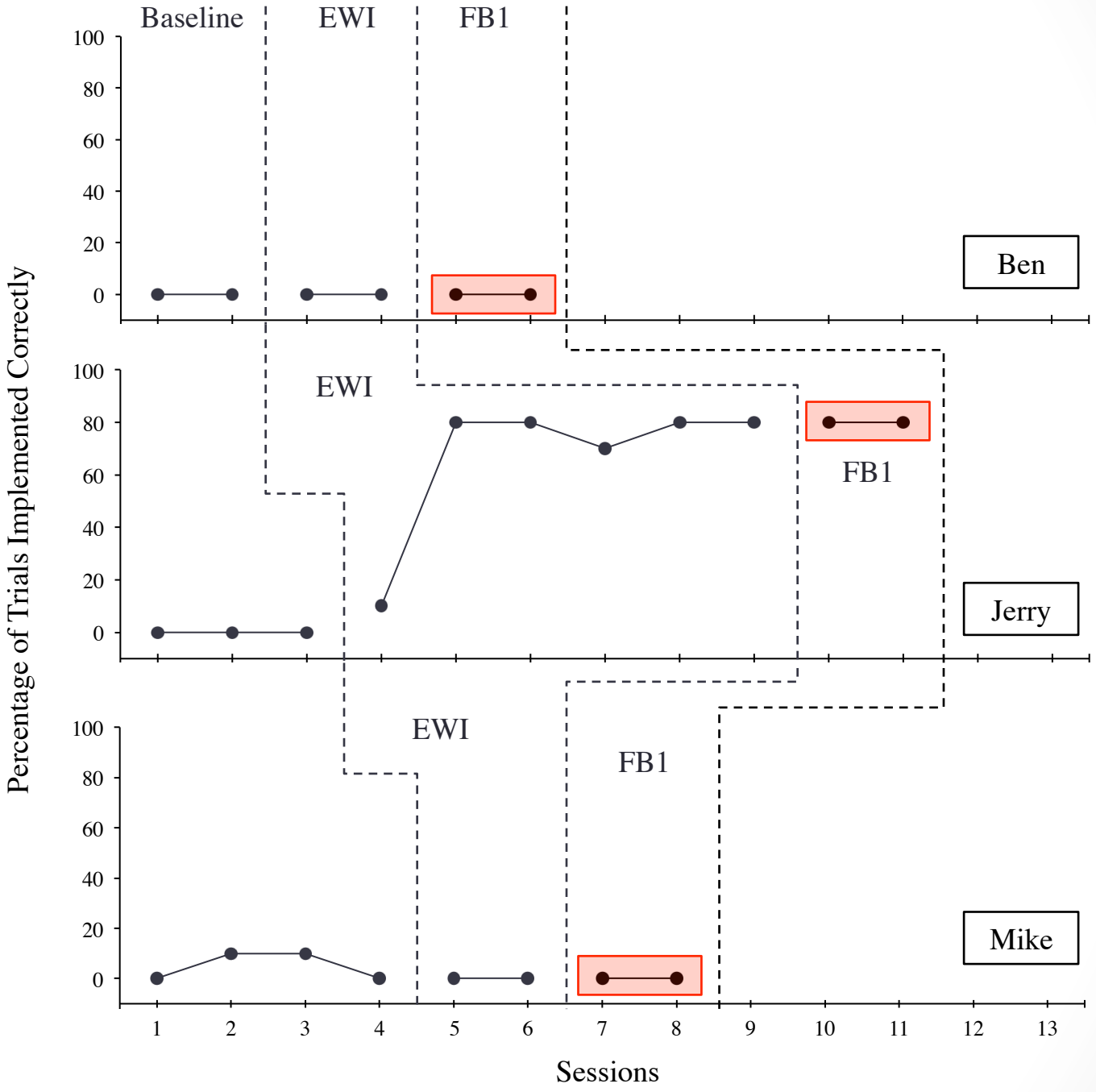
FB 3

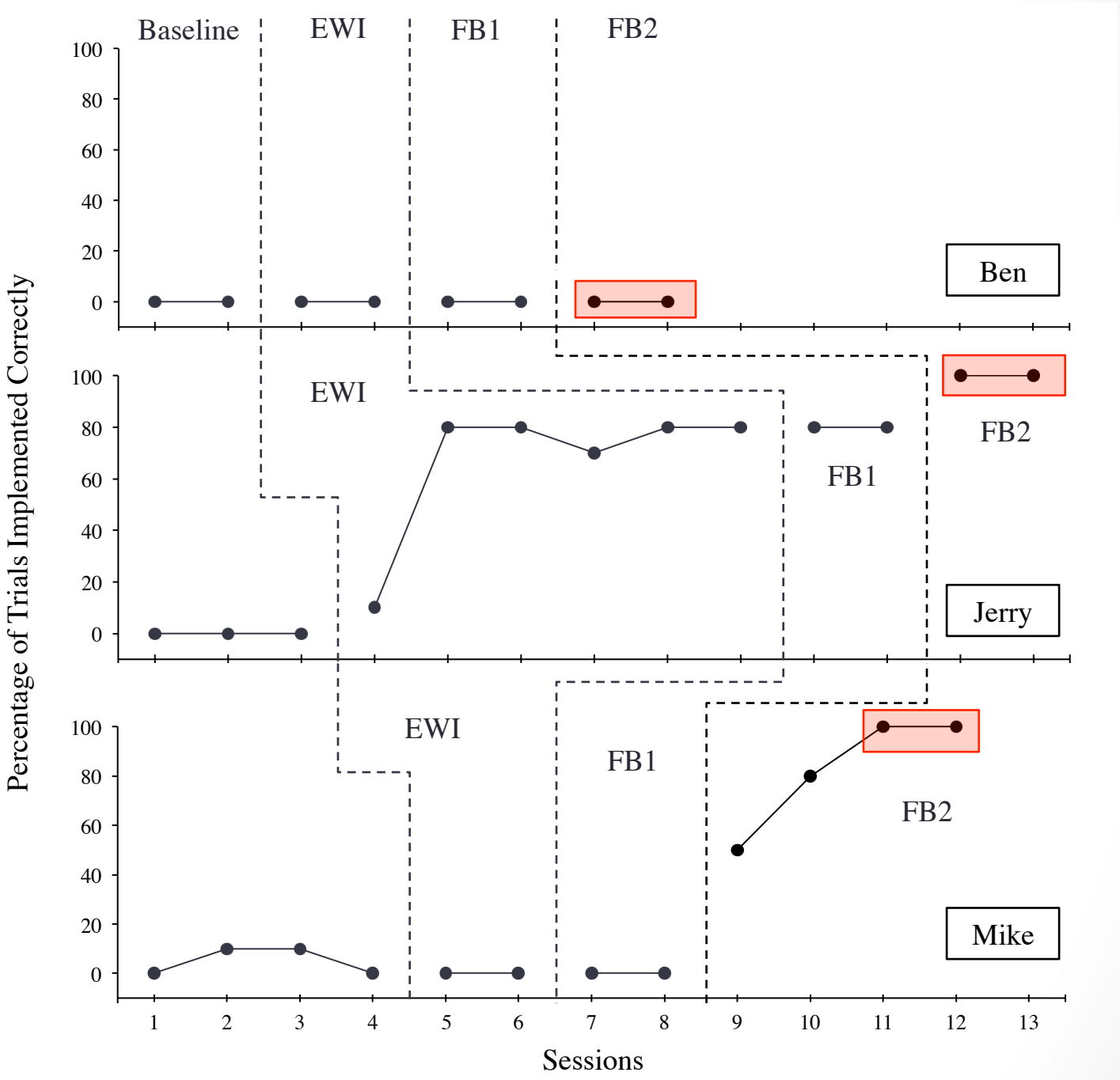
- Model plus strategies for correct responding
  - Example:

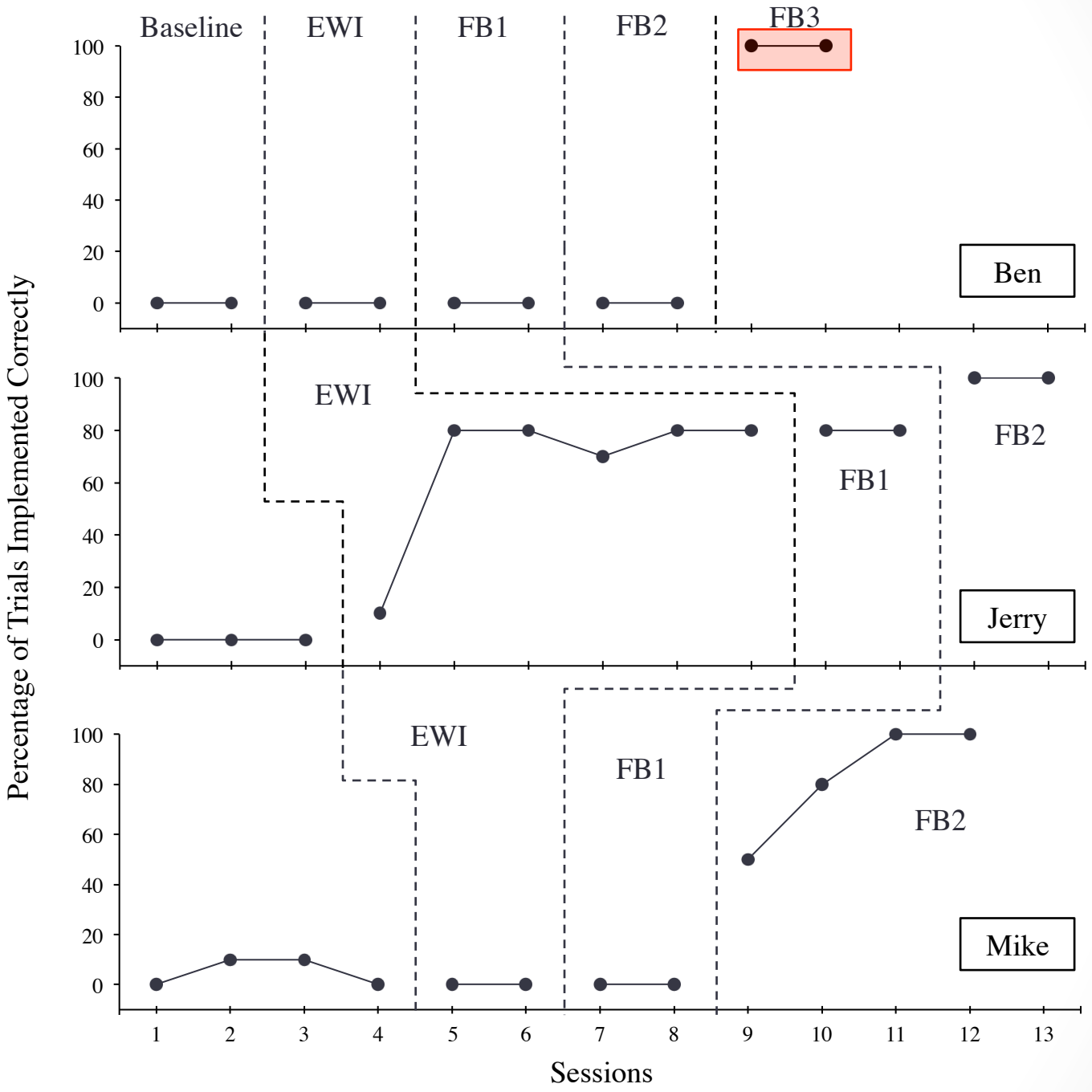
Dependent Variable	Operational Definition	Correct
4. Response blocking	Blocked approaches to more than one item or an item that that is not in your pool of items by reaching your hands out to the consumer's hands	No

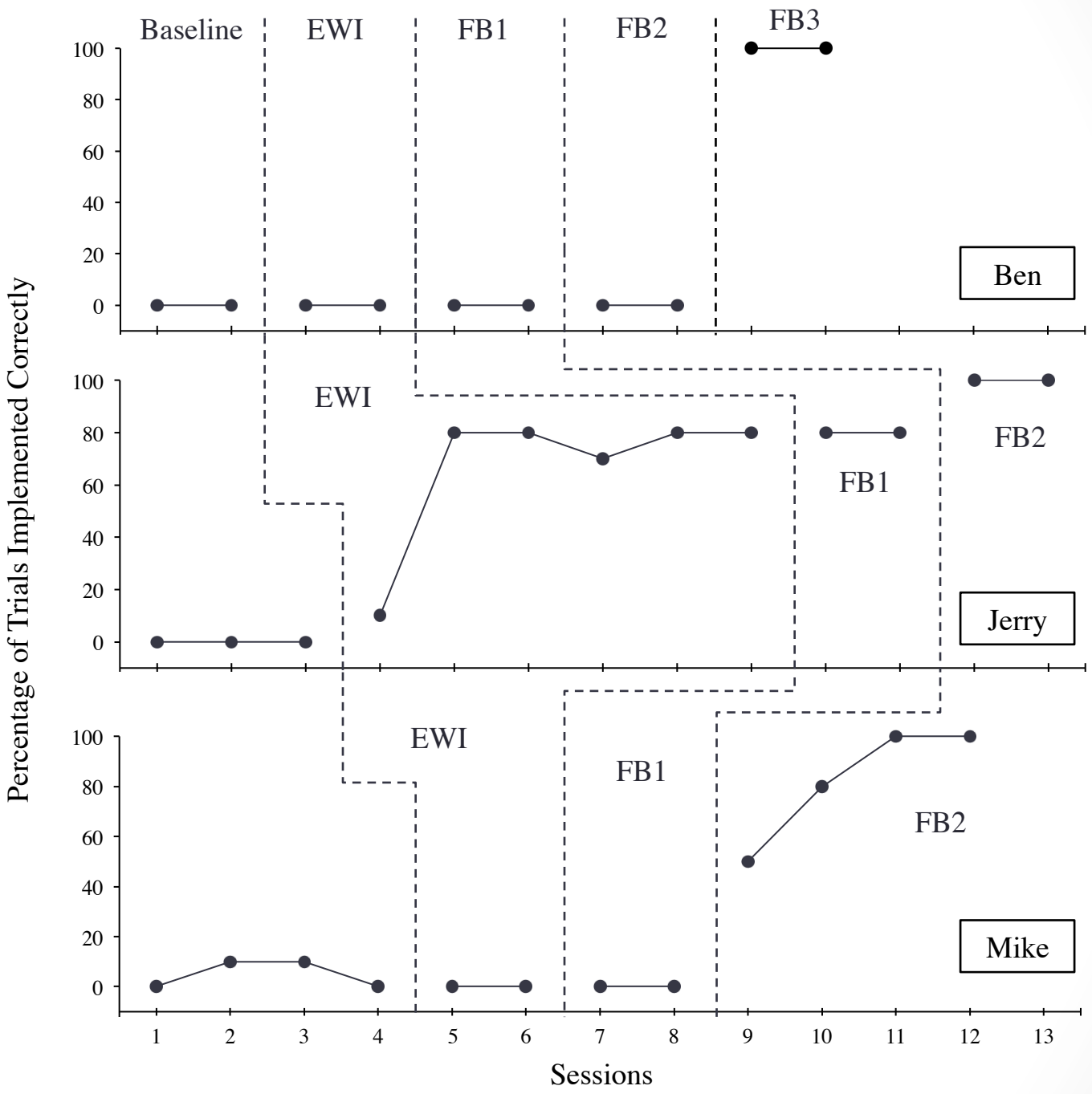

Baseline
100
80
60
40
20
0
Ben
Jerry
Mike
Percentage of Trials Implemented Correctly
1
2
3
4
5
6
7
8
9
10
11
12
13
Sessions

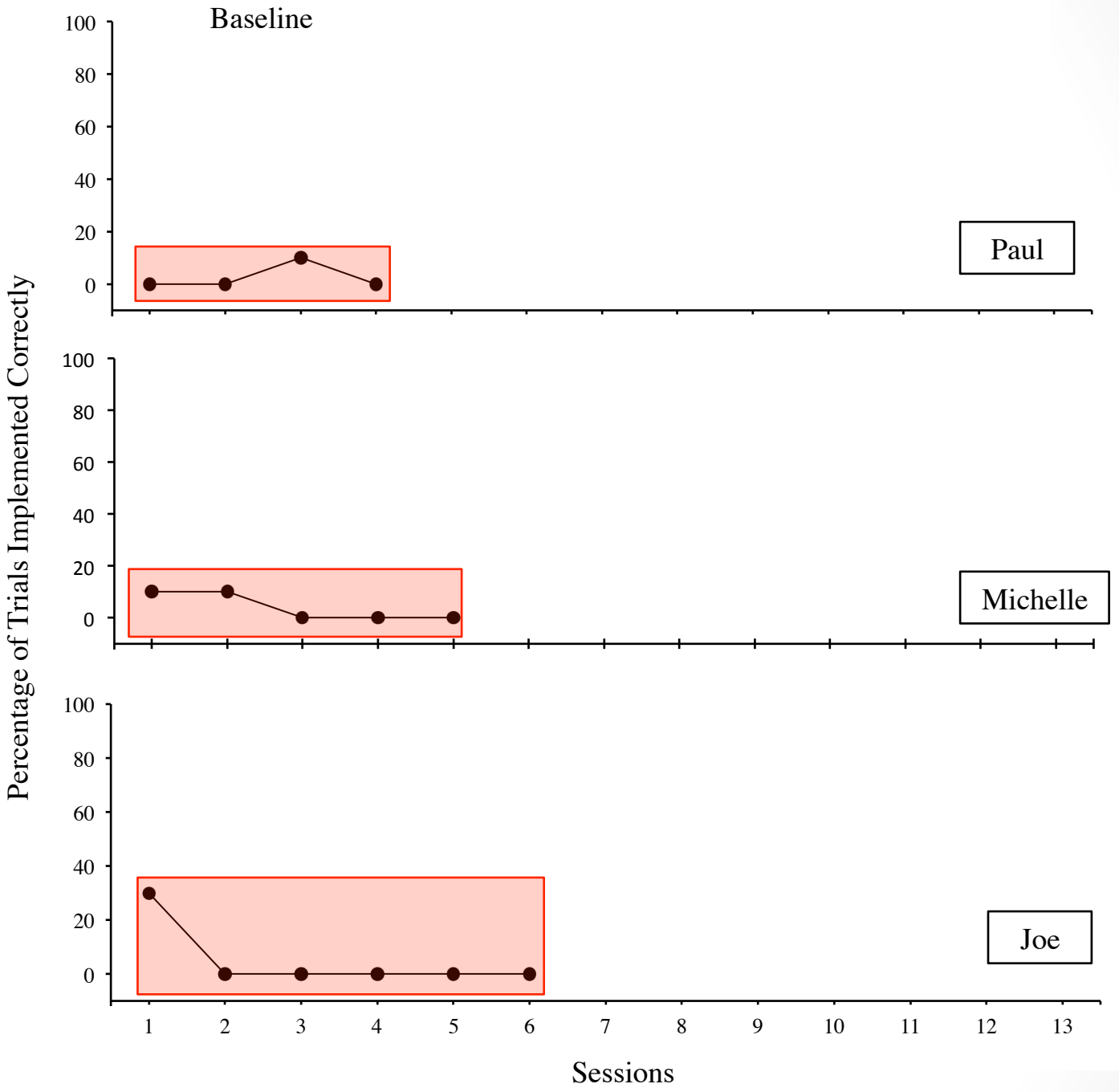

Baseline
EWI
EWI
EWI
Ben
Jerry
Mike
Percentage of Trials Implemented Correctly
Sessions
100
80
60
40
20
0
1
2
3
4
5
6
7
8
9
10
11
12
13

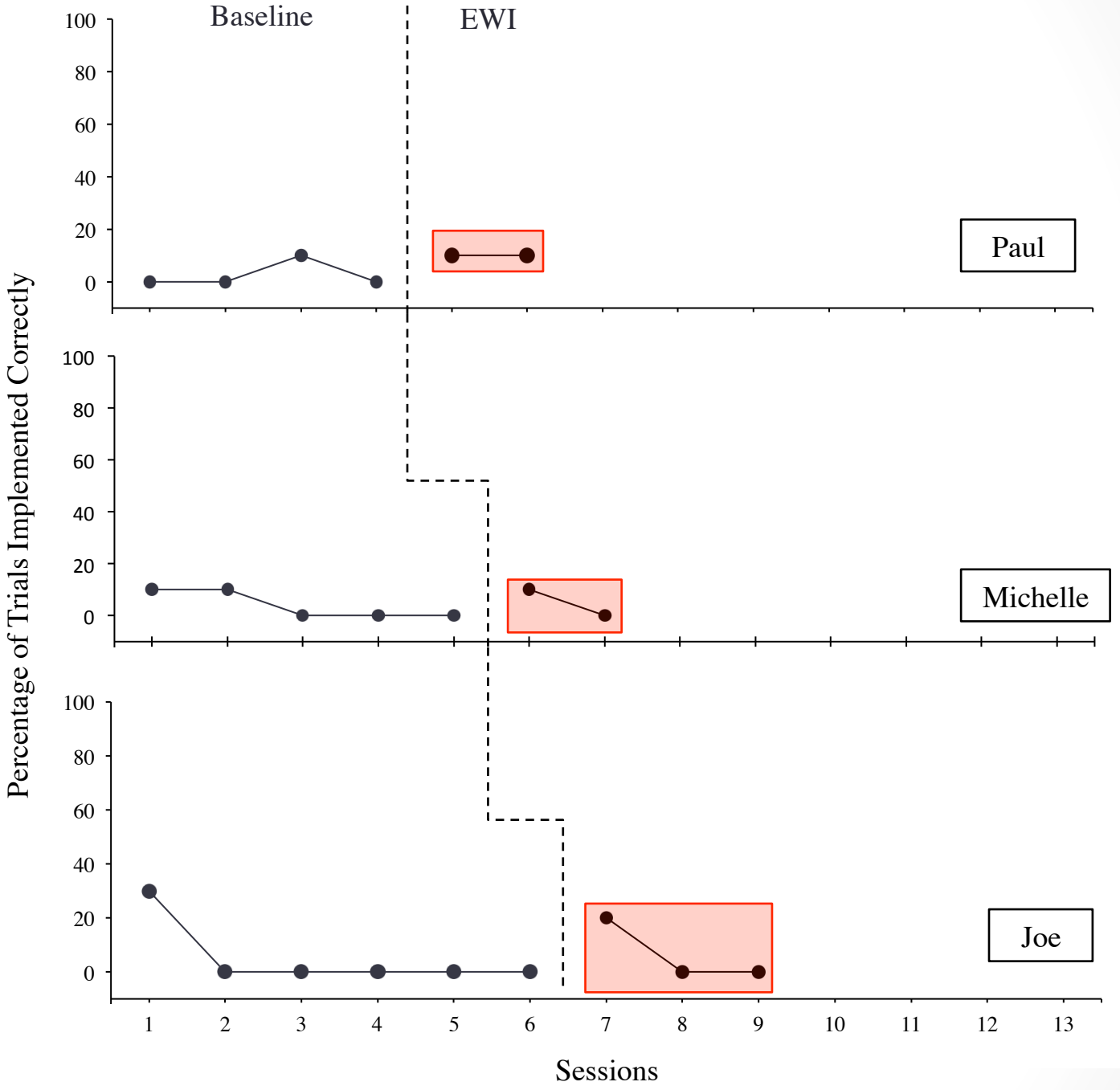

Baseline
EWI
FB1
Ben
EWI
FB1
Jerry
EWI
FB1
Mike
Percentage of Trials Implemented Correctly
Sessions
100
80
60
40
20
0
1
2
3
4
5
6
7
8
9
10
11
12
13

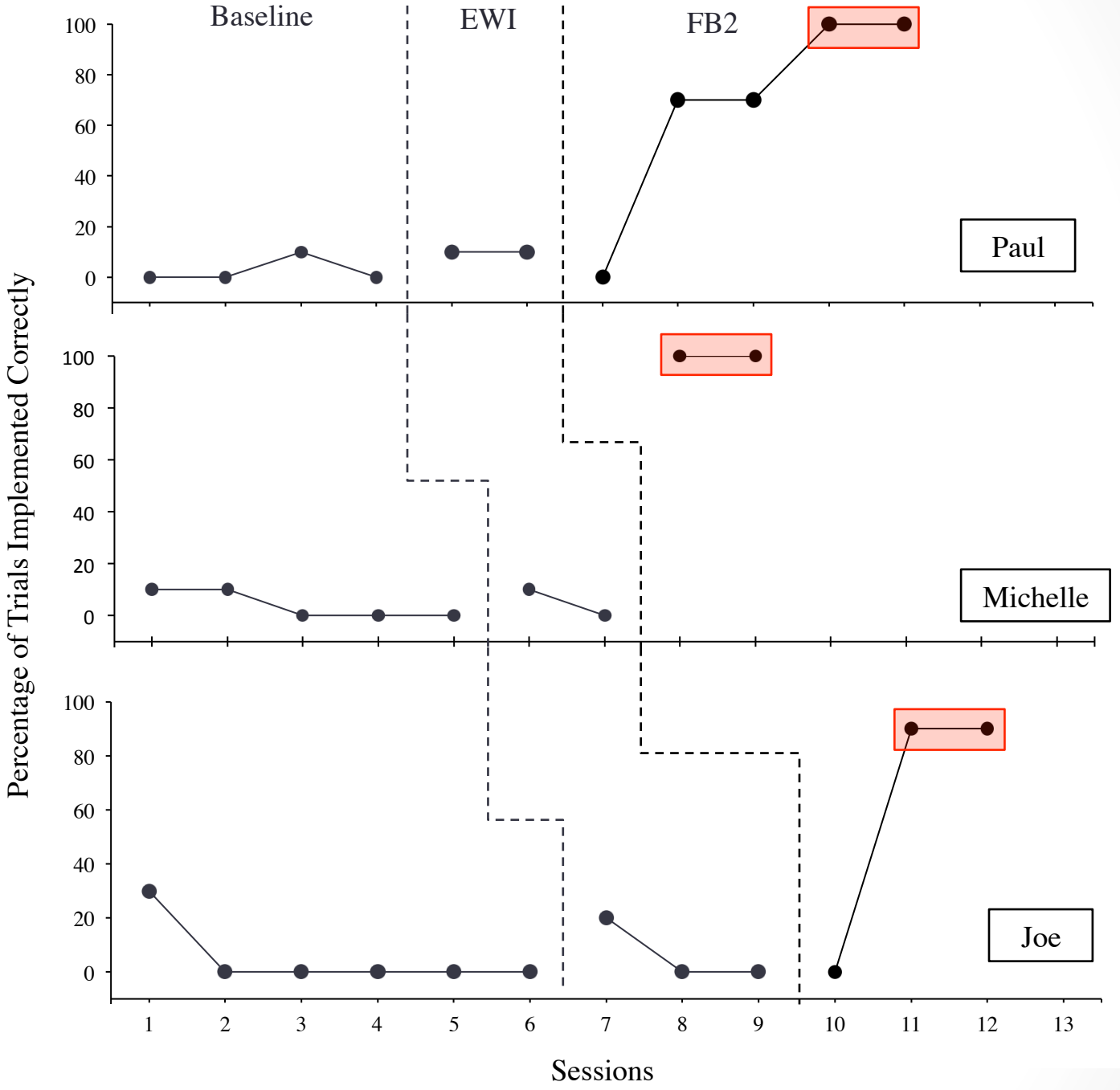

Baseline
EWI
FB1
FB2
Ben
EWI
FB1
FB2
Jerry
EWI
FB1
FB2
Mike
Percentage of Trials Implemented Correctly
Sessions
100
80
60
40
20
0
1
2
3
4
5
6
7
8
9
10
11
12
13


Baseline
EWI
FB1
FB2
FB3
Ben
Jerry
Mike
Percentage of Trials Implemented Correctly
Sessions
0
20
40
60
80
100
1
2
3
4
5
6
7
8
9
10
11
12
13


Baseline
EWI
FB1
FB2
FB3
Ben
EWI
FB1
FB2
Jerry
EWI
FB1
FB2
Mike
Percentage of Trials Implemented Correctly
Sessions
100
80
60
40
20
0
1
2
3
4
5
6
7
8
9
10
11
12
13


Baseline
Paul
Michelle
Joe
Percentage of Trials Implemented Correctly
Sessions
100
80
60
40
20
0
1
2
3
4
5
6
7
8
9
10
11
12
13


Baseline
EWI
Paul
Michelle
Joe
Percentage of Trials Implemented Correctly
Sessions
100
80
60
40
20
0
1
2
3
4
5
6
7
8
9
10
11
12
13


Baseline
EWI
FB2
Paul
Michelle
Joe
Percentage of Trials Implemented Correctly
Sessions
100
80
60
40
20
0
1
2
3
4
5
6
7
8
9
10
11
12
13

Results

- FB2 in additive sequence
  - 2/3 met mastery
- FB2 immediately after self-instructional package
  - All met mastery
- When self-instructional packages are not enough
  - Rubric outlining target behaviors
  - Accuracy of performance

Implications

- Efficiency
  - 2 components

Implications

- Efficiency
  - 2 components
- Practicality
  - Average session duration = 2 minutes
  - Average sessions to criterion = 3 sessions

Implications

- Efficiency
  - 2 components
- Practicality
  - Average session duration = 2 minutes
  - Average sessions to criterion = 3 sessions
- No need to interrupt client sessions

Limitations

- Rubric + performance not effective for one participant
- Self-instructional package sessions were followed by feedback
- Social validity
- Required professional to be present

Future Research

- Can FB2 be delivered discretely?
  - If so, examine whether in-person delivery necessary
- Evaluate with other procedures
- Continue to conduct component analyses of feedback

Selected References

Alvero, A. M., Bucklin, B. R., & Austin, J. (2001). An objective review of the effectiveness and essential characteristics of performance feedback in organizational settings. *Journal Of Organizational Behavior Management*, *21*(1), 3-29.doi:10.1300/J075v21n01_02

Balcazar, F. E., Hopkins, B. L., & Suarez, Y. (1985). A critical, objective review of performance feedback. *Journal Of Organizational Behavior Management, 7*(3-4), 65-89.doi:10.1300J075v07n03_05

Graff, R. B., & Karsten, A. M. (2012). Evaluation of a self-instruction package for conducting stimulus preference assessments. *Journal Of Applied Behavior Analysis, 45*(1), 69-82. doi:10.1901/jaba. 2012.5-69

Shapiro, M., Mendoza, M., & Kazemi, E. (2014 February) How Can We Maximize a Supervisor's Efficiency? Presented at the annual California Association of Behavior Analysis conference, Burlingame, CA.