## Supplementary material: Descriptive data and statistical analysis

Table 1. Student 1 Attention

| Within conditions | A1 | B1 | A2 | B2 |
| :---: | :---: | :---: | :---: | :---: |
| M, Mdn, range | $\mathrm{M}=2.3$ | $\mathrm{M}=3.93$ | $\mathrm{M}=2.38$ | $\mathrm{M}=4.04$ |
|  | Mdn=2.4 | Mdn=3.98 | $\mathrm{Mdn}=2.43$ | $\mathrm{Mdn}=4.08$ |
|  | Range $=2-2.4$ | Range=3.55-4.2 | Range $=1.9-2.75$ | Range $=3.6-4.4$ |
| Stability |  |  |  |  |
| +/- 25\% Mdn 0.6 | 1.8-3 | 3.38-4.58 | 1.83-3.03 | 3.48-4.68 |
| $80 \%$ = stable | 4/4 stable | 4/4 stable | 4/4 stable | 4/4 stable |
| Stability -trend | $2.4-2.2$ | $3.78-4.08$ | $2.55-2.2$ | $4.25-3.83$ |
| Between conditions | A1->B1 | B1 -> A2 | A2 -> B2 | A $->$ B |
| Relative level change | $2.2-3.78=1.58$ improved | $4.08-2.55=1.53$ <br> deteriorated | $2.2-4.25=$ improved |  |
| Absolute level change | 2 | -1.6 | 2.2 |  |
| Median level change | 1.58 | -1.55 | 1.65 |  |
| Mean level change | 1.63 | -1.55 | -1.66 |  |
| PND: | 100\% | 100\% | 100\% | 100\% |
| POD: | 0\% | 0\% | 0\% | 0\% |

Note. A1 \& A2 = joint reading, B1 \& B2 = MSMD. PND = percent non overlapping data, POD= percent overlapping data.

Table 2. Student 1 Initiation

| Within conditions | A1 | B1 | A2 | B2 |
| :---: | :---: | :---: | :---: | :---: |
| M, Mdn, range | M $=3.19$ | $\mathrm{M}=3.84$ | $\mathrm{M}=3.32$ | $\mathrm{M}=4.07$ |
|  | Mdn=3.14 | $\mathrm{Mdn}=3.87$ | Mdn=3.23 | Mdn=4.1 |
|  | Range $=2.87-3.6$ | $\begin{aligned} & \text { Range }=3.67- \\ & 3.93 \end{aligned}$ | Range $=3-3.47$ | Range $=3.73-4.33$ |
| Stability | 2.35-3.93 | 3.05-4.66 | 2.44-4.02 | 3.31-4.89 |
| +/- 25\% Mdn 0.79 | 4/4 stable | 4/4 stable | 4/4 stable | 4/4 stable |
| 80\%=stable |  |  |  |  |
| Stability -trend | 3.34-3.04 decelerating | 3.8-3.87 accelerating | 3.3-3.17 decelerating | 4.23-3.9 decelerating |
| Between conditions | A1->B1 | B1 -> A2 | A2-> B2 | A $->$ B |
| Relative level change | $3.02-3.8=0.78$ improved | $3.87-3.3=-0.57$ <br> deteriorated | $\begin{aligned} & 3.17-4.23=1.06 \\ & \text { improved } \end{aligned}$ |  |
| Absolute level change | 0.80 improved | $\begin{aligned} & -0.40 \\ & \text { deteriorated } \end{aligned}$ | 1.13 improved |  |
| Median level change | 0.73 improved | $-0.64$ <br> deteriorated | 0.87 improved |  |

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| Mean level change | 0.65 improved | -0.52 | 0.75 improved |  |
| :--- | :--- | :--- | :--- | :--- |
| PND: | $100 \%$ | deteriorated |  |  |
| POD: | $0 \%$ | $100 \%$ | $100 \%$ | $100 \%$ |

Note. A1 \& A2 = joint reading, B1 \& B2 = MSMD. PND $=$ percent non overlapping data, $\mathrm{POD}=$ percent overlapping data.

Table 3. Student 1 School staff member ratings

| Within conditions | A1 | B1 | A2 | B2 |
| :--- | :--- | :--- | :--- | :--- |
| M, Mdn, range | $\mathrm{M}=7.5$ | $\mathrm{M}=16.75$ | $\mathrm{M}=10.75$ | $\mathrm{M}=18$ |
|  | $\mathrm{Mdn}=7$ | $\mathrm{Mdn}=18$ | $\mathrm{Mdn}=10.5$ | $\mathrm{Mdn}=17$ |
|  | Range $=6-10$ | Range $=7-20$ | Range $=8-14$ | Range $=16-19$ |
| Stability | $5.25-8.75$ | $16.75-19.75$ | $8.75-12.25$ | $15.25-18.75$ |
| $+/-25 \%$ Mdn 1.75 | $3 / 475 \%$ | $0 / 4$ | $2 / 4$ | $4 / 4$ stable |
| $80 \%=$ stable | variable | variable | variable |  |
| Stability -trend | $8.5-6.5$ | $11.5-20$ | $12-9.5$ | $19-17$ decelerating |
|  | decelerating | accelerating | decelerating |  |
| Between conditions | A1-B1 | B1 -> A2 | A2 -> B2 | A->B |
| Relative level change | 5 improved | -8 deteriorated | 9.5 improved |  |
| Absolute level change | 1 improved | -6 deteriorated | 11 improved |  |
| Median level change | 11 improved | -7.5 deteriorated | 6.5 improved |  |
| Mean level change | 9.25 improved | -6 deteriorated | 7.25 improved |  |
| PND: | $75 \%$ | $75 \%$ | $100 \%$ | $88 \%$ |
| POD: | $25 \%$ | $25 \%$ | $0 \%$ | $13 \%$ |

Note. A1 \& A2 = joint reading, B1 \& B2 = MSMD. PND = percent non overlapping data, POD= percent overlapping data.

Table 4. Student 2 Attention

| Within conditions | A1 | B1 | A2 | B2 |
| :---: | :---: | :---: | :---: | :---: |
| M, Mdn, range | $\mathrm{M}=2.68$ | $\mathrm{M}=4.1$ | $\mathrm{M}=2.5$ | $\mathrm{M}=4.03$ |
|  | Mdn=2.68 | Mdn=4.1 | Mdn=2.53 | Mdn=4 |
|  | Range=2.35-3 | $\begin{aligned} & \text { Range=3.95- } \\ & 4.25 \end{aligned}$ | Range $=2.3-2.65$ | Range $=3.85-4.25$ |
| Stability |  |  |  |  |
| +/- $25 \%$ Mdn $=0.67$ | 2.01-3.35 | 4.1-4.77 | 1.86-3.2 | 3.33-4.67 |
| 80\% $=$ stable | 4/4 stable | 4/4 stable | 4/4 stable | 4/4 stable |
| Stability -trend | 2.95-2.4 <br> decelerating | 4.1-4.1 <br> flat | $2.48-2.53$ <br> accelerating | 4.05-4 decelerating |
| Between conditions | A1->B1 | B1 -> A2 | A2 -> B2 | A->B |
| Relative level change | 1.05 improved | $\begin{aligned} & -1.62 \\ & \text { deteriorated } \end{aligned}$ | 1.52 improved |  |
| Absolute level change | 1.9 improved | -1.8 deteriorated | 1.25 improved |  |
| Median level change | 1.42 improved | $\begin{aligned} & -1.57 \\ & \text { deteriorated } \end{aligned}$ | 1.47 improved |  |

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| Mean level change | 1.42 improved | -1.6 deteriorated | 1.53 improved |  |
| :--- | :--- | :--- | :--- | :--- |
| PND: | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ |
| POD: | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ |

Note. A1 \& A2 = joint reading, B1 \& B2 = MSMD. PND = percent non overlapping data, $\mathrm{POD}=$ percent overlapping data.

Table 5. Student 2 Initiation

| Within conditions | A1 | B1 | A2 | B2 |
| :---: | :---: | :---: | :---: | :---: |
| M, Mdn, range | $\mathrm{M}=2.32$ | $\mathrm{M}=3.33$ | $\mathrm{M}=2.52$ | $\mathrm{M}=3.37$ |
|  | Mdn=2.4 | $\mathrm{Mdn}=3.33$ | $\mathrm{Mdn}=2.5$ | Mdn=3.33 |
|  | Range $=1.87-2.6$ | Range=3.2-3.47 | Range $=2.33-2.8$ | Range $=3.27-3.53$ |
| Stability |  |  |  |  |
| +/- 25\% Mdn 0.6 | 1.8-3 | 2.73-3.93 | 1.9-3.1 | 2.73-3.93 |
| $80 \%=$ stable | 4/4 stable | 4/4 stable | 4/4 stable | 4/4 stable |
| Stability -trend | $2.57-2.07$ <br> decelerating | 3.3-3.4 accelerating | 2.3-2.74 <br> accelerating | 3.33-3.4 accelerating |
| Between conditions | A1->B1 | B1 -> A2 | A2 -> B2 | A $\gg$ B |
| Relative level change | 1.23 improved | -1.1 deteriorated | 0.59 improved |  |
| Absolute level change | 1.33 improved | -1.2 deteriorated | 0.66 improved |  |
| Median level change | 0.93 improved | $\begin{aligned} & -0.83 \\ & \text { deteriorated } \end{aligned}$ | 0.83 improved |  |
| Mean level change | 1.01 improved | -0.81 <br> deteriorated | 0.85 improved |  |
| PND: | 100\% | 100\% | 100\% | 100\% |
| POD: | 0\% | 0\% | 0\% | 0\% |

Note. A1 \& A2 = joint reading, B1 \& B2 = MSMD. PND = percent non overlapping data, POD= percent overlapping data.

Table 6. Student 2 School staff member ratings

| Within conditions | A1 | B1 | A2 | B2 |
| :--- | :--- | :--- | :--- | :--- |
| M, Mdn, range | $\mathrm{M}=5.25$ | $\mathrm{M}=15.5$ | $\mathrm{M}=5.25$ | $\mathrm{M}=15.5$ |
|  | $\mathrm{Mdn}=5$ | $\mathrm{Mdn}=16.5$ | $\mathrm{Mdn}=4$ | $\mathrm{Mdn}=15.5$ |
|  | Range $=5-6$ | Range $=11-18$ | Range $=3-10$ | Range $=12-19$ |
| Stability | $3.75-6.25$ | $15.25-17.75$ | $2.75-5.25$ | $14.25-16.75$ |
| $+/-25 \%$ Mdn 1.25 | $4 / 4$ | $0 / 4$ | $3 / 4$ | $2 / 4$ |
| $80 \%=$ stable | stable | variable | variable | variable |
|  |  |  |  |  |
| Stability -trend | $5-5.5$ | $14.5-16.5$ | $3.5-7$ | $13.5-17.5$ |
|  | accelerating | accelerating | accelerating | accelerating |
| Between conditions | A1-B1 | $\mathbf{B 1}->\mathbf{A 2}$ | $\mathbf{A 2}->\mathbf{B 2}$ | $\mathbf{A}->\mathbf{B}$ |
| Relative level change | 9 improved | -13 deteriorated | 6.5 improved |  |
| Absolute level change | 6 improved | -14 deteriorated | 2 improved |  |
| Median level change | 11.5 improved | -12.5 | 11.5 improved |  |
|  |  | deteriorated |  |  |

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| Mean level change | 10.25 improved | -10.25 | 10.25 improved |  |
| :--- | :--- | :--- | :--- | :--- |
| PND: | $100 \%$ | deteriorated |  |  |
| POD: | $0 \%$ | $100 \%$ | $100 \%$ | $100 \%$ |

Note. A1 \& A2 = joint reading, B1 \& B2 = MSMD. PND $=$ percent non overlapping data, $\mathrm{POD}=$ percent overlapping data.

Table 7. Student 3 Attention

| Within conditions | B1 | A1 | B2 | A2 |
| :---: | :---: | :---: | :---: | :---: |
| M, Mdn, range | $\mathrm{M}=4.01$ | $\mathrm{M}=3.31$ | $\mathrm{M}=3.89$ | $\mathrm{M}=3.24$ |
|  | Mdn=4 | Mdn=3.65 | Mdn=3.9 | Mdn=3.15 |
|  | Range=3.5-4.55 | Range $=2.2-3.75$ | Range $=3.5-4.25$ | Range $=2.95-3.7$ |
| Stability |  |  |  |  |
| +/- 25\% Mdn 1* | 3-5 | 2.65-4.65 | 2.9-4.9 | 2.15-4.15 |
| $80 \%=$ stable | 4/4 stable | 4/4 stable | 4/4 stable | 4/4 stable |
| Stability -trend | 4.2-3.78 decelerating | 2.9-3.73 accelerating | 3.7-4.08 accelerating | 3.33-3.15 <br> decelerating |
| Between conditions | B1->A1 | A1 -> B2 | B2 -> A2 | A $->$ B |
| Relative level change | $\begin{aligned} & -0.88 \\ & \text { deteriorated } \end{aligned}$ | $-0.03$ <br> deteriorated | $-1.47$ <br> deteriorated |  |
| Absolute level change | $\begin{aligned} & -0.55 \\ & \text { deteriorated } \end{aligned}$ | $-0.25$ <br> deteriorated | $-0.95$ <br> deteriorated |  |
| Median level change | $-0.35$ <br> deteriorated | 0.25 improved | $-0.75$ <br> deteriorated |  |
| Mean level change | -0.7 deteriorated | 0.58 improved | $\begin{aligned} & -0.65 \\ & \text { deteriorated } \end{aligned}$ |  |
| PND: | 75\% | 75\% | 75\% | 75\% |
| POD: | 25\% | 25\% | 25\% | 25\% |

Note. * Calculated on median from phase A1. A1 \& A2 = joint reading, B1 \& B2 = MSMD. PND = percent non overlapping data, $\mathrm{POD}=$ percent overlapping data.

Table 8. Student 3 Initiation

| Within conditions | B1 | A1 | B2 | A2 |
| :--- | :--- | :--- | :--- | :--- |
| M, Mdn, range | $\mathrm{M}=3.75$ | $\mathrm{M}=3.02$ | $\mathrm{M}=3.67$ | $\mathrm{M}=2.98$ |
|  | $\mathrm{Mdn}=3.67$ | $\mathrm{Mdn}=3.14$ | $\mathrm{Mdn}=3.64$ | $\mathrm{Mdn}=3.07$ |
|  | Range $=3.53-$ | Range $=2.2-3.6$ | Range $=3.13-$ | Range $=2.33-3.47$ |
|  | 4.13 |  | 4.27 |  |
| Stability |  |  |  |  |
| $+/-25 \%$ Mdn $0.92^{*}$ | $2.75-4.59$ | $2.22-4.06$ | $2.72-4.56$ | $2.15-3.99$ |
| $80 \%=$ stable | stable | stable | stable | stable |

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| Stability -trend | $3.9-3.6$ | $2.7-3.34$ | $3.4-3.94$ | $2.9-3.07$ |
| :--- | :--- | :--- | :--- | :--- |
| Between conditions | decelerating <br> B1->A1 | accelerating <br> $\mathbf{A 1 - >} \mathbf{B 2}$ | accelerating <br> $\mathbf{B 2}->\mathbf{A 2}$ | accelerating <br> A->B |
| Relative level change | -0.9 deteriorated | 0.06 improved | -1.04 |  |
|  |  |  | deteriorated |  |
| Absolute level change | -0.47 | -0.47 | -1.27 |  |
|  | deteriorated | deteriorated | deteriorated |  |
| Median level change | -0.53 | 0.50 improved | -0.57 |  |
|  | deteriorated |  | deteriorated |  |
| Mean level change | -0.73 | 0.65 improved | -0.68 |  |
|  | deteriorated |  | deteriorated |  |
| PND: | $75 \%$ | $50 \%$ | $75 \%$ | $63 \%$ |
| POD: | $25 \%$ | $50 \%$ | $25 \%$ | $38 \%$ |

Note. * Calculated on median from phase A1. A1 \& A2 = joint reading, B1 \& B2 = MSMD. PND = percent non overlapping data, $\mathrm{POD}=$ percent overlapping data.

Table 9. Student 3 School staff member ratings

| Within conditions | B1 | A1 | B2 | A2 |
| :--- | :--- | :--- | :--- | :--- |
| M, Mdn, range | $\mathrm{M}=14.25$ | $\mathrm{M}=10.5$ | $\mathrm{M}=9.5$ | $\mathrm{M}=8.25$ |
|  | Mdn=14.5 | $\mathrm{Mdn}=12$ | $\mathrm{Mdn}=10$ | $\mathrm{Mdn}=9$ |
|  | Range $=13-15$ | Range $=3-15$ | Range $=3-15$ | Range=3-12 |
| Stability | $11.5-17.5$ | $9-15$ | $7-13$ | $6-12$ |
| +/- 25\% Mdn 3* | $4 / 4$ stable | $3 / 4$ variable | $2 / 4$ variable | $3 / 4$ variable |
| $80 \%=$ stable |  |  |  |  |
| Stability -trend | $14-14.5$ | $7-14$ | $6.5-12.5$ | $5.5-11$ accelerating |
|  | decelerating | accelerating | accelerating |  |
| Between conditions | B1-A1 | A1 $->$ B2 | B2 -> A2 | A->B |
| Relative level change | -7.5 deteriorated | -7.5 deteriorated | -7 deteriorated |  |
| Absolute level change | -4 deteriorated | -5 deteriorated | -12 deteriorated |  |
| Median level change | -2.5 deteriorated | -2 deteriorated | -1 deteriorated |  |
| Mean level change | -3.75 | -1 deteriorated | -1 deteriorated |  |
|  | deteriorated |  |  |  |
| PND: | $0 \%$ | $0 \%$ | $25 \%$ | $0 \%$ |
| POD: | $100 \%$ | $100 \%$ | $75 \%$ | $100 \%$ |

Note. * Calculated on median from phase A1. A1 \& A2 = joint reading, B1 \& B2 = MSMD. PND = percent non overlapping data, $\mathrm{POD}=$ percent overlapping data.

