**Table 1.** Self-feedback and cross-domain coupling for overall grades, ability self-concept school and interest in school as well as for Hope for Success, Fear of Failure, and Need for Cognition

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | *B* | *SE* | 95% CI | | 𝛽 | *p* |  |
|  |  |  |  | lower | upper |  |  |  |
| ΔGrade | Grade$ | -0.47 | 0.05 | -0.57 | -0.37 | -0.66 | < .001 | \*\*\* |
|  | Ability Self-Concept | 0.12 | 0.07 | -0.02 | 0.26 | 0.18 | 0.088 |  |
|  | Interest | 0.00 | 0.06 | -0.12 | 0.11 | 0.00 | 0.995 |  |
|  | Hope for Success | -0.04 | 0.10 | -0.23 | 0.15 | -0.03 | 0.697 |  |
|  | Fear of Failure | 0.05 | 0.09 | -0.13 | 0.23 | 0.04 | 0.588 |  |
|  | Need for Cognition | 0.13 | 0.07 | 0.00 | 0.27 | 0.16 | 0.049 | \* |
| ΔAbility Self-Concept | Grade | 0.02 | 0.05 | -0.09 | 0.12 | 0.02 | 0.758 |  |
|  | Ability Self-Concept$ | -0.43 | 0.08 | -0.59 | -0.28 | -0.66 | < .001 | \*\*\* |
|  | Interest | 0.23 | 0.06 | 0.11 | 0.35 | 0.39 | < .001 | \*\*\* |
|  | Hope for Success | 0.12 | 0.09 | -0.05 | 0.30 | 0.09 | 0.172 |  |
|  | Fear of Failure | -0.04 | 0.08 | -0.20 | 0.12 | -0.03 | 0.633 |  |
|  | Need for Cognition | -0.01 | 0.06 | -0.13 | 0.12 | -0.01 | 0.933 |  |
| ΔInterest | Grade | 0.02 | 0.06 | -0.08 | 0.13 | 0.03 | 0.673 |  |
|  | Ability Self-Concept | 0.12 | 0.09 | -0.06 | 0.30 | 0.17 | 0.199 |  |
|  | Interest$ | -0.33 | 0.08 | -0.48 | -0.17 | -0.50 | < .001 | \*\*\* |
|  | Hope for Success | 0.07 | 0.10 | -0.13 | 0.27 | 0.05 | 0.506 |  |
|  | Fear of Failure | 0.04 | 0.09 | -0.14 | 0.22 | 0.03 | 0.663 |  |
|  | Need for Cognition | 0.04 | 0.07 | -0.10 | 0.18 | 0.04 | 0.581 |  |
| ΔHope for Success | Grade | 0.05 | 0.03 | 0.00 | 0.10 | 0.12 | 0.067 |  |
|  | Ability Self-Concept | -0.04 | 0.04 | -0.12 | 0.03 | -0.12 | 0.268 |  |
|  | Interest | 0.04 | 0.03 | -0.02 | 0.11 | 0.13 | 0.192 |  |
|  | Hope for Success$ | -0.45 | 0.06 | -0.57 | -0.32 | -0.57 | < .001 | \*\*\* |
|  | Fear of Failure | -0.01 | 0.05 | -0.11 | 0.09 | -0.02 | 0.813 |  |
|  | Need for Cognition | 0.22 | 0.04 | 0.13 | 0.31 | 0.44 | < .001 | \*\*\* |
| ΔFear of Failure | Grade | -0.02 | 0.04 | -0.09 | 0.05 | -0.05 | 0.566 |  |
|  | Ability Self-Concept | 0.02 | 0.05 | -0.08 | 0.12 | 0.06 | 0.663 |  |
|  | Interest | -0.03 | 0.04 | -0.11 | 0.06 | -0.07 | 0.569 |  |
|  | Hope for Success | 0.08 | 0.06 | -0.04 | 0.20 | 0.10 | 0.175 |  |
|  | Fear of Failure$ | -0.20 | 0.06 | -0.32 | -0.07 | -0.25 | 0.002 | \*\* |
|  | Need for Cognition | -0.08 | 0.04 | -0.16 | 0.01 | -0.14 | 0.088 |  |
| ΔNeed for Cognition | Grade | 0.03 | 0.03 | -0.02 | 0.08 | 0.09 | 0.220 |  |
|  | Ability Self-Concept | -0.01 | 0.05 | -0.10 | 0.08 | -0.03 | 0.828 |  |
|  | Interest | 0.01 | 0.04 | -0.06 | 0.09 | 0.03 | 0.778 |  |
|  | Hope for Success | 0.02 | 0.06 | -0.09 | 0.13 | 0.03 | 0.704 |  |
|  | Fear of Failure | -0.09 | 0.05 | -0.20 | 0.01 | -0.13 | 0.086 |  |
|  | Need for Cognition$ | -0.13 | 0.04 | -0.22 | -0.05 | -0.29 | 0.002 | \*\* |

*Note.* $ Self-feedback paths, other paths are cross-domain coupling

**Table 2.** Self-feedback and cross-domain coupling for German grades, ability self-concept German and interest in German as well as for Hope for Success, Fear of Failure, and Need for Cognition

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | *B* | *SE* | 95% CI | | 𝛽 | *p* |  |
|  |  |  |  | lower | upper |  |  |  |
| ΔGrade | Grade$ | -0.47 | 0.05 | -0.57 | -0.37 | -0.66 | < .001 | \*\*\* |
|  | Ability Self-Concept | 0.12 | 0.07 | -0.02 | 0.26 | 0.18 | 0.088 |  |
|  | Interest | 0.00 | 0.06 | -0.12 | 0.11 | 0.00 | 0.995 |  |
|  | Hope for Success | -0.04 | 0.10 | -0.23 | 0.15 | -0.03 | 0.697 |  |
|  | Fear of Failure | 0.05 | 0.09 | -0.13 | 0.23 | 0.04 | 0.588 |  |
|  | Need for Cognition | 0.13 | 0.07 | 0.00 | 0.27 | 0.16 | 0.049 | \* |
| ΔAbility Self-Concept | Grade | 0.02 | 0.05 | -0.09 | 0.12 | 0.02 | 0.758 |  |
|  | Ability Self-Concept$ | -0.43 | 0.08 | -0.59 | -0.28 | -0.66 | < .001 | \*\*\* |
|  | Interest | 0.23 | 0.06 | 0.11 | 0.35 | 0.39 | < .001 | \*\*\* |
|  | Hope for Success | 0.12 | 0.09 | -0.05 | 0.30 | 0.09 | 0.172 |  |
|  | Fear of Failure | -0.04 | 0.08 | -0.20 | 0.12 | -0.03 | 0.633 |  |
|  | Need for Cognition | -0.01 | 0.06 | -0.13 | 0.12 | -0.01 | 0.933 |  |
| ΔInterest | Grade | 0.02 | 0.06 | -0.08 | 0.13 | 0.03 | 0.673 |  |
|  | Ability Self-Concept | 0.12 | 0.09 | -0.06 | 0.30 | 0.17 | 0.199 |  |
|  | Interest$ | -0.33 | 0.08 | -0.48 | -0.17 | -0.50 | < .001 | \*\*\* |
|  | Hope for Success | 0.07 | 0.10 | -0.13 | 0.27 | 0.05 | 0.506 |  |
|  | Fear of Failure | 0.04 | 0.09 | -0.14 | 0.22 | 0.03 | 0.663 |  |
|  | Need for Cognition | 0.04 | 0.07 | -0.10 | 0.18 | 0.04 | 0.581 |  |
| ΔHope for Success | Grade | 0.05 | 0.03 | 0.00 | 0.10 | 0.12 | 0.067 |  |
|  | Ability Self-Concept | -0.04 | 0.04 | -0.12 | 0.03 | -0.12 | 0.268 |  |
|  | Interest | 0.04 | 0.03 | -0.02 | 0.11 | 0.13 | 0.192 |  |
|  | Hope for Success$ | -0.45 | 0.06 | -0.57 | -0.32 | -0.57 | < .001 | \*\*\* |
|  | Fear of Failure | -0.01 | 0.05 | -0.11 | 0.09 | -0.02 | 0.813 |  |
|  | Need for Cognition | 0.22 | 0.04 | 0.13 | 0.31 | 0.44 | < .001 | \*\*\* |
| ΔFear of Failure | Grade | -0.02 | 0.04 | -0.09 | 0.05 | -0.05 | 0.566 |  |
|  | Ability Self-Concept | 0.02 | 0.05 | -0.08 | 0.12 | 0.06 | 0.663 |  |
|  | Interest | -0.03 | 0.04 | -0.11 | 0.06 | -0.07 | 0.569 |  |
|  | Hope for Success | 0.08 | 0.06 | -0.04 | 0.20 | 0.10 | 0.175 |  |
|  | Fear of Failure$ | -0.20 | 0.06 | -0.32 | -0.07 | -0.25 | 0.002 | \*\* |
|  | Need for Cognition | -0.08 | 0.04 | -0.16 | 0.01 | -0.14 | 0.088 |  |
| ΔNeed for Cognition | Grade | 0.03 | 0.03 | -0.02 | 0.08 | 0.09 | 0.220 |  |
|  | Ability Self-Concept | -0.01 | 0.05 | -0.10 | 0.08 | -0.03 | 0.828 |  |
|  | Interest | 0.01 | 0.04 | -0.06 | 0.09 | 0.03 | 0.778 |  |
|  | Hope for Success | 0.02 | 0.06 | -0.09 | 0.13 | 0.03 | 0.704 |  |
|  | Fear of Failure | -0.09 | 0.05 | -0.20 | 0.01 | -0.13 | 0.086 |  |
|  | Need for Cognition$ | -0.13 | 0.04 | -0.22 | -0.05 | -0.29 | 0.002 | \*\* |

*Note.* $ Self-feedback paths, other paths are cross-domain coupling

**Table 3.** Self-feedback and cross-domain coupling for Math grades, ability self-concept Math and interest in Math as well as for Hope for Success, Fear of Failure, and Need for Cognition

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | *B* | *SE* | 95% CI | | 𝛽 | *p* |  |
|  |  |  |  | lower | upper |  |  |  |
| ΔGrade | Grade$ | -0.47 | 0.05 | -0.57 | -0.37 | -0.66 | < .001 | \*\*\* |
|  | Ability Self-Concept | 0.12 | 0.07 | -0.02 | 0.26 | 0.18 | 0.088 |  |
|  | Interest | 0.00 | 0.06 | -0.12 | 0.11 | 0.00 | 0.995 |  |
|  | Hope for Success | -0.04 | 0.10 | -0.23 | 0.15 | -0.03 | 0.697 |  |
|  | Fear of Failure | 0.05 | 0.09 | -0.13 | 0.23 | 0.04 | 0.588 |  |
|  | Need for Cognition | 0.13 | 0.07 | 0.00 | 0.27 | 0.16 | 0.049 | \* |
| ΔAbility Self-Concept | Grade | 0.02 | 0.05 | -0.09 | 0.12 | 0.02 | 0.758 |  |
|  | Ability Self-Concept$ | -0.43 | 0.08 | -0.59 | -0.28 | -0.66 | < .001 | \*\*\* |
|  | Interest | 0.23 | 0.06 | 0.11 | 0.35 | 0.39 | < .001 | \*\*\* |
|  | Hope for Success | 0.12 | 0.09 | -0.05 | 0.30 | 0.09 | 0.172 |  |
|  | Fear of Failure | -0.04 | 0.08 | -0.20 | 0.12 | -0.03 | 0.633 |  |
|  | Need for Cognition | -0.01 | 0.06 | -0.13 | 0.12 | -0.01 | 0.933 |  |
| ΔInterest | Grade | 0.02 | 0.06 | -0.08 | 0.13 | 0.03 | 0.673 |  |
|  | Ability Self-Concept | 0.12 | 0.09 | -0.06 | 0.30 | 0.17 | 0.199 |  |
|  | Interest$ | -0.33 | 0.08 | -0.48 | -0.17 | -0.50 | < .001 | \*\*\* |
|  | Hope for Success | 0.07 | 0.10 | -0.13 | 0.27 | 0.05 | 0.506 |  |
|  | Fear of Failure | 0.04 | 0.09 | -0.14 | 0.22 | 0.03 | 0.663 |  |
|  | Need for Cognition | 0.04 | 0.07 | -0.10 | 0.18 | 0.04 | 0.581 |  |
| ΔHope for Success | Grade | 0.05 | 0.03 | 0.00 | 0.10 | 0.12 | 0.067 |  |
|  | Ability Self-Concept | -0.04 | 0.04 | -0.12 | 0.03 | -0.12 | 0.268 |  |
|  | Interest | 0.04 | 0.03 | -0.02 | 0.11 | 0.13 | 0.192 |  |
|  | Hope for Success$ | -0.45 | 0.06 | -0.57 | -0.32 | -0.57 | < .001 | \*\*\* |
|  | Fear of Failure | -0.01 | 0.05 | -0.11 | 0.09 | -0.02 | 0.813 |  |
|  | Need for Cognition | 0.22 | 0.04 | 0.13 | 0.31 | 0.44 | < .001 | \*\*\* |
| ΔFear of Failure | Grade | -0.02 | 0.04 | -0.09 | 0.05 | -0.05 | 0.566 |  |
|  | Ability Self-Concept | 0.02 | 0.05 | -0.08 | 0.12 | 0.06 | 0.663 |  |
|  | Interest | -0.03 | 0.04 | -0.11 | 0.06 | -0.07 | 0.569 |  |
|  | Hope for Success | 0.08 | 0.06 | -0.04 | 0.20 | 0.10 | 0.175 |  |
|  | Fear of Failure$ | -0.20 | 0.06 | -0.32 | -0.07 | -0.25 | 0.002 | \*\* |
|  | Need for Cognition | -0.08 | 0.04 | -0.16 | 0.01 | -0.14 | 0.088 |  |
| ΔNeed for Cognition | Grade | 0.03 | 0.03 | -0.02 | 0.08 | 0.09 | 0.220 |  |
|  | Ability Self-Concept | -0.01 | 0.05 | -0.10 | 0.08 | -0.03 | 0.828 |  |
|  | Interest | 0.01 | 0.04 | -0.06 | 0.09 | 0.03 | 0.778 |  |
|  | Hope for Success | 0.02 | 0.06 | -0.09 | 0.13 | 0.03 | 0.704 |  |
|  | Fear of Failure | -0.09 | 0.05 | -0.20 | 0.01 | -0.13 | 0.086 |  |
|  | Need for Cognition$ | -0.13 | 0.04 | -0.22 | -0.05 | -0.29 | 0.002 | \*\* |

*Note.* $ Self-feedback paths, other paths are cross-domain coupling

**Table 4.** Self-feedback and cross-domain coupling for Physics grades, ability self-concept Physics and interest in Physics as well as for Hope for Success, Fear of Failure, and Need for Cognition

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | *B* | *SE* | 95% CI | | 𝛽 | *p* |  |
|  |  |  |  | lower | upper |  |  |  |
| ΔGrade | Grade$ | -0.47 | 0.05 | -0.57 | -0.37 | -0.66 | < .001 | \*\*\* |
|  | Ability Self-Concept | 0.12 | 0.07 | -0.02 | 0.26 | 0.18 | 0.088 |  |
|  | Interest | 0.00 | 0.06 | -0.12 | 0.11 | 0.00 | 0.995 |  |
|  | Hope for Success | -0.04 | 0.10 | -0.23 | 0.15 | -0.03 | 0.697 |  |
|  | Fear of Failure | 0.05 | 0.09 | -0.13 | 0.23 | 0.04 | 0.588 |  |
|  | Need for Cognition | 0.13 | 0.07 | 0.00 | 0.27 | 0.16 | 0.049 | \* |
| ΔAbility Self-Concept | Grade | 0.02 | 0.05 | -0.09 | 0.12 | 0.02 | 0.758 |  |
|  | Ability Self-Concept$ | -0.43 | 0.08 | -0.59 | -0.28 | -0.66 | < .001 | \*\*\* |
|  | Interest | 0.23 | 0.06 | 0.11 | 0.35 | 0.39 | < .001 | \*\*\* |
|  | Hope for Success | 0.12 | 0.09 | -0.05 | 0.30 | 0.09 | 0.172 |  |
|  | Fear of Failure | -0.04 | 0.08 | -0.20 | 0.12 | -0.03 | 0.633 |  |
|  | Need for Cognition | -0.01 | 0.06 | -0.13 | 0.12 | -0.01 | 0.933 |  |
| ΔInterest | Grade | 0.02 | 0.06 | -0.08 | 0.13 | 0.03 | 0.673 |  |
|  | Ability Self-Concept | 0.12 | 0.09 | -0.06 | 0.30 | 0.17 | 0.199 |  |
|  | Interest$ | -0.33 | 0.08 | -0.48 | -0.17 | -0.50 | < .001 | \*\*\* |
|  | Hope for Success | 0.07 | 0.10 | -0.13 | 0.27 | 0.05 | 0.506 |  |
|  | Fear of Failure | 0.04 | 0.09 | -0.14 | 0.22 | 0.03 | 0.663 |  |
|  | Need for Cognition | 0.04 | 0.07 | -0.10 | 0.18 | 0.04 | 0.581 |  |
| ΔHope for Success | Grade | 0.05 | 0.03 | 0.00 | 0.10 | 0.12 | 0.067 |  |
|  | Ability Self-Concept | -0.04 | 0.04 | -0.12 | 0.03 | -0.12 | 0.268 |  |
|  | Interest | 0.04 | 0.03 | -0.02 | 0.11 | 0.13 | 0.192 |  |
|  | Hope for Success$ | -0.45 | 0.06 | -0.57 | -0.32 | -0.57 | < .001 | \*\*\* |
|  | Fear of Failure | -0.01 | 0.05 | -0.11 | 0.09 | -0.02 | 0.813 |  |
|  | Need for Cognition | 0.22 | 0.04 | 0.13 | 0.31 | 0.44 | < .001 | \*\*\* |
| ΔFear of Failure | Grade | -0.02 | 0.04 | -0.09 | 0.05 | -0.05 | 0.566 |  |
|  | Ability Self-Concept | 0.02 | 0.05 | -0.08 | 0.12 | 0.06 | 0.663 |  |
|  | Interest | -0.03 | 0.04 | -0.11 | 0.06 | -0.07 | 0.569 |  |
|  | Hope for Success | 0.08 | 0.06 | -0.04 | 0.20 | 0.10 | 0.175 |  |
|  | Fear of Failure$ | -0.20 | 0.06 | -0.32 | -0.07 | -0.25 | 0.002 | \*\* |
|  | Need for Cognition | -0.08 | 0.04 | -0.16 | 0.01 | -0.14 | 0.088 |  |
| ΔNeed for Cognition | Grade | 0.03 | 0.03 | -0.02 | 0.08 | 0.09 | 0.220 |  |
|  | Ability Self-Concept | -0.01 | 0.05 | -0.10 | 0.08 | -0.03 | 0.828 |  |
|  | Interest | 0.01 | 0.04 | -0.06 | 0.09 | 0.03 | 0.778 |  |
|  | Hope for Success | 0.02 | 0.06 | -0.09 | 0.13 | 0.03 | 0.704 |  |
|  | Fear of Failure | -0.09 | 0.05 | -0.20 | 0.01 | -0.13 | 0.086 |  |
|  | Need for Cognition$ | -0.13 | 0.04 | -0.22 | -0.05 | -0.29 | 0.002 | \*\* |

*Note.* $ Self-feedback paths, other paths are cross-domain coupling

**Table 5.** Self-feedback and cross-domain coupling for Chemistry grades, ability self-concept Chemistry and interest in Chemistry as well as for Hope for Success, Fear of Failure, and Need for Cognition

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | *B* | *SE* | 95% CI | | 𝛽 | *p* |  |
|  |  |  |  | lower | upper |  |  |  |
| ΔGrade | Grade$ | -0.47 | 0.05 | -0.57 | -0.37 | -0.66 | < .001 | \*\*\* |
|  | Ability Self-Concept | 0.12 | 0.07 | -0.02 | 0.26 | 0.18 | 0.088 |  |
|  | Interest | 0.00 | 0.06 | -0.12 | 0.11 | 0.00 | 0.995 |  |
|  | Hope for Success | -0.04 | 0.10 | -0.23 | 0.15 | -0.03 | 0.697 |  |
|  | Fear of Failure | 0.05 | 0.09 | -0.13 | 0.23 | 0.04 | 0.588 |  |
|  | Need for Cognition | 0.13 | 0.07 | 0.00 | 0.27 | 0.16 | 0.049 | \* |
| ΔAbility Self-Concept | Grade | 0.02 | 0.05 | -0.09 | 0.12 | 0.02 | 0.758 |  |
|  | Ability Self-Concept$ | -0.43 | 0.08 | -0.59 | -0.28 | -0.66 | < .001 | \*\*\* |
|  | Interest | 0.23 | 0.06 | 0.11 | 0.35 | 0.39 | < .001 | \*\*\* |
|  | Hope for Success | 0.12 | 0.09 | -0.05 | 0.30 | 0.09 | 0.172 |  |
|  | Fear of Failure | -0.04 | 0.08 | -0.20 | 0.12 | -0.03 | 0.633 |  |
|  | Need for Cognition | -0.01 | 0.06 | -0.13 | 0.12 | -0.01 | 0.933 |  |
| ΔInterest | Grade | 0.02 | 0.06 | -0.08 | 0.13 | 0.03 | 0.673 |  |
|  | Ability Self-Concept | 0.12 | 0.09 | -0.06 | 0.30 | 0.17 | 0.199 |  |
|  | Interest$ | -0.33 | 0.08 | -0.48 | -0.17 | -0.50 | < .001 | \*\*\* |
|  | Hope for Success | 0.07 | 0.10 | -0.13 | 0.27 | 0.05 | 0.506 |  |
|  | Fear of Failure | 0.04 | 0.09 | -0.14 | 0.22 | 0.03 | 0.663 |  |
|  | Need for Cognition | 0.04 | 0.07 | -0.10 | 0.18 | 0.04 | 0.581 |  |
| ΔHope for Success | Grade | 0.05 | 0.03 | 0.00 | 0.10 | 0.12 | 0.067 |  |
|  | Ability Self-Concept | -0.04 | 0.04 | -0.12 | 0.03 | -0.12 | 0.268 |  |
|  | Interest | 0.04 | 0.03 | -0.02 | 0.11 | 0.13 | 0.192 |  |
|  | Hope for Success$ | -0.45 | 0.06 | -0.57 | -0.32 | -0.57 | < .001 | \*\*\* |
|  | Fear of Failure | -0.01 | 0.05 | -0.11 | 0.09 | -0.02 | 0.813 |  |
|  | Need for Cognition | 0.22 | 0.04 | 0.13 | 0.31 | 0.44 | < .001 | \*\*\* |
| ΔFear of Failure | Grade | -0.02 | 0.04 | -0.09 | 0.05 | -0.05 | 0.566 |  |
|  | Ability Self-Concept | 0.02 | 0.05 | -0.08 | 0.12 | 0.06 | 0.663 |  |
|  | Interest | -0.03 | 0.04 | -0.11 | 0.06 | -0.07 | 0.569 |  |
|  | Hope for Success | 0.08 | 0.06 | -0.04 | 0.20 | 0.10 | 0.175 |  |
|  | Fear of Failure$ | -0.20 | 0.06 | -0.32 | -0.07 | -0.25 | 0.002 | \*\* |
|  | Need for Cognition | -0.08 | 0.04 | -0.16 | 0.01 | -0.14 | 0.088 |  |
| ΔNeed for Cognition | Grade | 0.03 | 0.03 | -0.02 | 0.08 | 0.09 | 0.220 |  |
|  | Ability Self-Concept | -0.01 | 0.05 | -0.10 | 0.08 | -0.03 | 0.828 |  |
|  | Interest | 0.01 | 0.04 | -0.06 | 0.09 | 0.03 | 0.778 |  |
|  | Hope for Success | 0.02 | 0.06 | -0.09 | 0.13 | 0.03 | 0.704 |  |
|  | Fear of Failure | -0.09 | 0.05 | -0.20 | 0.01 | -0.13 | 0.086 |  |
|  | Need for Cognition$ | -0.13 | 0.04 | -0.22 | -0.05 | -0.29 | 0.002 | \*\* |

*Note.* $ Self-feedback paths, other paths are cross-domain coupling