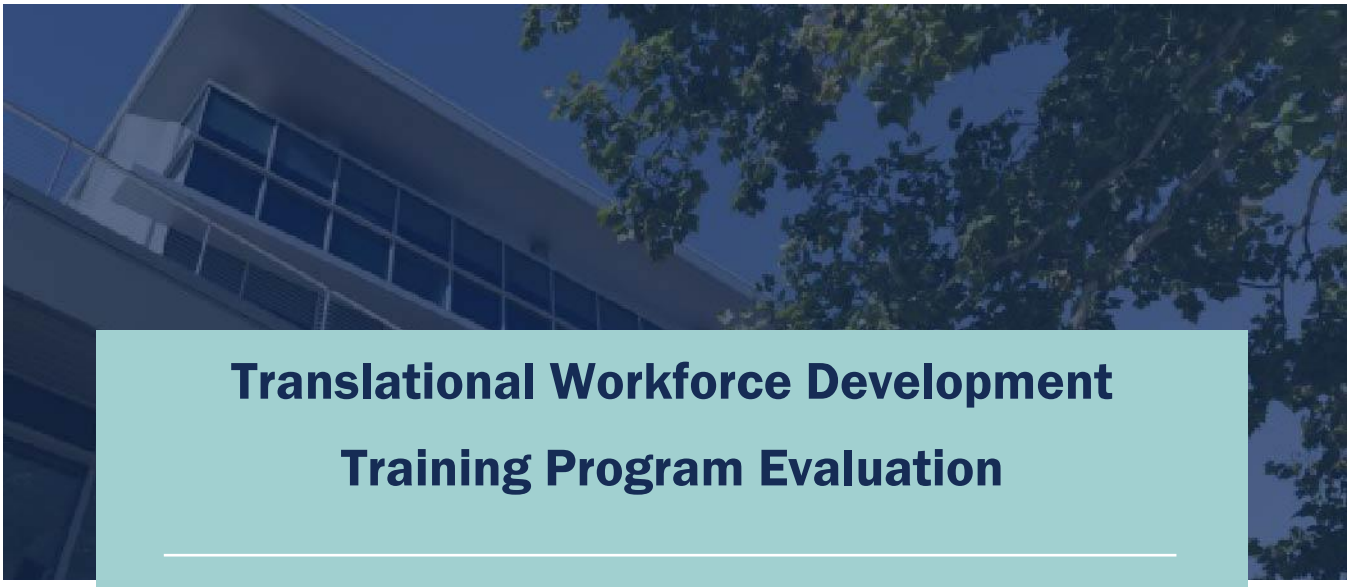

Translational Workforce Development Training Program Evaluation

Scale References

Prepared by
Yulia A. Strekalova, PhD, MBA
Assistant Professor, College of Journalism and Communications
Director, Educational Development and Evaluation
Clinical Translational Science Institute
yulias@ufl.edu

UF Clinical and Translational Science Institute
Translational Workforce Development
UNIVERSITY *of* FLORIDA

Contents

Scales in this reference material are presented in their original form as published in reference papers. Several scales have been reviewed with a group of evaluators from other CTSI and academic medical centers and modified to address evaluation goals of translational workforce development and training programs.

Average survey completion time: 14 minutes

Research Orientation Scale

Hall, K. L., Stokols, D., Moser, R. P., Taylor, B. K., Thornquist, M. D., Nebeling, L. C., ... & Goran, M. I. (2008). The collaboration readiness of transdisciplinary research teams and centers: findings from the National Cancer Institute's TREC year-one evaluation study. *American journal of preventive medicine*, *35*(2), S161-S172.

The scale has three sub-indexes: uni-disciplinary orientation (1-3), multi-disciplinary orientation (4-5), and inter-/transdisciplinary orientation (6-10)

1. I tend to be more productive working on my own research projects than working as a member of a collaborative research team.

2. There is so much work to be done within my field that it is important to focus my research efforts with others in my own discipline.

3. The research questions I am often interested in generally do not warrant collaboration from other disciplines.

4. While working on a research project within my discipline, I sometimes feel it is important to seek the perspective of other disciplines when trying to answer particular parts of my research question.

5. Although I rely primarily on knowledge from my primary field of interest, I usually work interactively with colleagues from other disciplines to address a research problem.

6. The benefits of collaboration among scientists from different disciplines usually outweigh the inconveniences and costs of such work.

7. In my collaborations with others I integrate research methods from different disciplines.

8. In my own work, I typically incorporate perspectives from disciplinary orientations that are different from my own.

9. Although I was trained in a particular discipline, I devote much of my time to understanding other disciplines in order to inform my research.

10. In my collaborations with others I integrate theories and models from different disciplines.

Collaborative Activities Scale

Hall, K. L., Stokols, D., Moser, R. P., Taylor, B. K., Thornquist, M. D., Nebeling, L. C., ... & Goran, M. I. (2008). The collaboration readiness of transdisciplinary research teams and centers: findings from the National Cancer Institute's TREC year-one evaluation study. *American journal of preventive medicine*, *35*(2), S161-S172.

These items assess the frequency with which each respondent engages in cross-disciplinary activities, such as reading journals or attending conferences outside of one's primary field, and experiences establishing links with colleagues in different disciplines that have led to, or may lead to, collaborative work.

Please assess the frequency with which you typically engage in each of the activities listed below.

Referring to ALL of your professional activities:	Never	Rarely	Once a Year	Twice a Year	Quarterly	Monthly	Weekly
a. Read journals or publications outside of your primary field	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
b. Attend meetings or conferences outside of your primary field	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
c. Participate in working groups or committees with the intent to integrate ideas with other participants	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
d. Obtain new insights into your own work through discussion with colleagues who come from different fields or disciplinary orientations	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
e. Modify your own work or research agenda as a result of discussions with colleagues who come from different fields or disciplinary orientations	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
f. Establish links with colleagues from different fields or disciplinary orientations that have led to or may lead to future collaborative work	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7

Interpersonal Collaboration Scale

Hall, K. L., Stokols, D., Moser, R. P., Taylor, B. K., Thornquist, M. D., Nebeling, L. C., ... & Goran, M. I. (2008). The collaboration readiness of transdisciplinary research teams and centers: findings from the National Cancer Institute's TREC year-one evaluation study. *American journal of preventive medicine*, *35*(2), S161-S172.

These items assess investigators' perceptions of the interpersonal collaborative processes occurring at their center. Examples of these processes include communication, trust, and social cohesion (Hall et al, 2008).

Please assess the extent to which you agree or disagree with each of the following statements about the collaborative aspects of your center ***(insert organization here, e.g. center, institution, department, etc.).***.

Referring to your lab/team/center:	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
1. I am confident that our center will be successful in achieving its inter- or transdisciplinary *research* goals.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
2. I am confident that our center will be successful in achieving its inter- or transdisciplinary *training* goals.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
3. The members of our center have a high level of mutual trust in each other.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
4. The members of our center are a socially cohesive group.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
5. The PI/Director/Leader/Mentor of our center is effective in promoting a climate of collaboration and trust.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Teamwork Quality Survey

Hoegl, M., & Gemuenden, H. G. (2001). Teamwork quality and the success of innovative projects: A theoretical concept and empirical evidence. *Organization science*, *12*(4), 435-449.

5-point Likert scale (strongly agree to strongly disagree)

Teamwork Quality (38)

Communication (10)

1. There is frequent communication within the team
2. The team members communicate often in spontaneous meetings, phone conversations, etc.
3. The team members communicate mostly directly and personally with each other
4. There are mediators through whom much communication is conducted∗
5. Relevant ideas and information relating to the teamwork is shared openly by all team members
6. Important information is kept away from other team members in certain situations∗
7. In the team there are conflicts regarding the openness of the information flow∗
8. The team members are happy with the timeliness in which they receive information from other team members
9. The team members are happy with the precision of the information they receive from other team members
10. The team members are happy with the usefulness of the information they receive from other team members

Coordination (4)

11. The work done on subtasks within the team is closely harmonized
12. There are clear and fully comprehended goals for subtasks within our team
13. The goals for subtasks are accepted by all team members
14. There are conflicting interests in our team regarding subtasks/subgoals∗

Mutual Support (7)

15. The team members help and support each other as best they can
16. If conflicts come up, they are easily and quickly resolved
17. Discussions and controversies are conducted constructively
18. Suggestions and contributions of team members are respected
19. Suggestions and contributions of team members are discussed and further developed
20. The team is able to reach consensus regarding important issues
21. The team cooperates well

Effort (4)

22. Every team member fully pushes the teamwork
23. Every team member makes the teamwork their highest priority
24. The team put(s) much effort into the teamwork
25. There are conflicts regarding the effort that team members put into the teamwork∗

Cohesion (10)

26. The teamwork is important to the team
27. It is important to team members to be part of the team
28. The team does not see anything special in this teamwork∗
29. The team members are strongly attached to the team
30. All team members are fully integrated in the team

31. There were many personal conflicts in the team∗
32. There is mutual sympathy between the members of the team
33. The team sticks together
34. The members of the team feel proud to be part of the team
35. Every team member feels responsible for maintaining and protecting the team

Balance of member Contribution (3)

36. The team recognizes the specific characteristics (strengths and weaknesses) of the individual team members
37. The team members contribute to the achievement of the team's goals in accordance with their specific potential
38. Imbalance of member contributions cause conflicts in our team∗

Team members' success (8) Work Satisfaction (4)

39. So far, the team can be pleased with its work
40. The team members gain from the collaborative teamwork
41. The team members will like to do this type of collaborative work again
42. We are able to acquire important know-how through this teamwork

Learning (4)

43. We consider this teamwork as a technical success
44. The team learn important lessons from this teamwork
45. Teamwork promotes one personally
46. Teamwork promotes one professionally

Team Performance (15)
Effectiveness (10)

47. Going by the results, this teamwork can be regarded as successful
48. All demands of the customers are satisfied
49. From the company's perspective, all team goals are achieved
50. The performance of the team advances our image to the customer
51. The teamwork result is of high quality
52. The customer is satisfied with the quality of the teamwork result
53. The team is satisfied with the teamwork result
54. The product produced in the team, requires little rework
55. The product proves to be stable in operation
56. The product proves to be robust in operation

Efficiency (5)

57. The company is satisfied with how the teamwork progresses
58. Overall, the team works in a cost-efficient way
59. Overall, the team works in a time-efficient way
60. The team is within schedule
61. The team is within budget

Psychological Safety Scale

Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative science quarterly*, *44*(2), 350-383.

Please indicate how strongly you agree or disagree with each of the following statements about your research group or team.

1. If you make a mistake in this team, it is held against you.
2. Members of this team are able to bring up problems and tough issues.
3. People on this team reject others for being different.
4. It is safe to take risks in this team.
5. It is difficult to ask other members of this team for help.
6. No one on this team would deliberately act in a way that undermines my efforts.
7. Working with members of this team, my unique skills and talents are valued and utilized.

Grit – Research

The scale below has been modified for application in research content from:

Duckworth, A. L., & Quinn, P. D. (2009). Development and validation of the Short Grit Scale (GRIT–S). *Journal of personality assessment*, *91*(2), 166-174.

1. New research ideas and projects sometimes distract me from previous ones. (R)
2. Research setbacks don't discourage me.
3. I have been obsessed with a certain research idea or project for a short time but later lost interest. (R)
4. I often start a research project but later choose to pursue a different one. (R)
5. I have difficulty maintaining my focus on research projects that take more than a few months to complete. (R)
6. I finish research projects and papers that I begin.
7. I am diligent with research projects.
8. I have overcome setbacks to conquer an important research challenge.

Behavioral Orientation Scale

Taggar, S., & Brown, T. C. (2001). Problem-solving team behaviors: Development and validation of BOS and a hierarchical factor structure. *Small Group Research*, *32*(6), 698-726.

Reaction to conflict

1. Leaves a conflict unresolved by not saying anything or ignoring some team members (R)
2. Leaves a conflict unresolved by leaving the meeting (R) Leaves a conflict unresolved by moving on to another topic (R)

Addresses conflict

3. Clarifies contentious issues in a conflict
4. Politely gives advice in a conflict
5. Politely confronts team members on their tardiness
6. Provides an alternative solution that is agreeable to other team members when a conflict occurs

Averts conflict

7. Resorts to personal attacks when a problem arises (R)
8. Tries to calm down team members who are in a conflict Takes a stance on an issue and is not willing to budge (R)

Synthesis of team's ideas

9. Builds on the group's ideas by offering solutions
10. Summarizes and organizes the group's ideas

Involving others

11. Clarifies and explains issues when someone does not understand
12. Asks other team members what they think

Participates in problem-solving

13. Offers ideas
14. Asks relevant questions
15. Accepts team roles and tasks as required
16. Voices unique ideas

Effective communication

17. Dominates the discussion (R)
18. Ignores what other team members are saying (R)
19. Carefully listens to what others are saying

Goal setting/achievement

20. Does not participate in setting team goals (R)
21. Participates in developing strategies to achieve team goals

Team citizenship

22. Uses humor to create a positive team atmosphere
23. Volunteers to do things that no one else wants to do
24. Keeps working when others quit

25. Exercises initiative by acting independently for the benefit of the team (e.g., makes a photocopy for all team members)
26. Takes the lead in coming up with ideas
27. Seeks information from resources from outside of the team (e.g., books, people, etc.)

Commitment to team

28. Misses team meetings (R)
29. Comes to team meetings late (R)

Focus on task-at-hand

30. Draws team members into off-topic discussions (R)
31. Does not try to bring off-topic team members back on topic (R)
32. Participates in off-topic conversations (R)
33. Draws team members into discussions that are relevant to achieving the goal
34. Asks for help in order to get other team members to focus on the goal
35. Reminds other team members of the team's goal

Preparation for meetings

36. Does not read the required material prior to team meetings (R)
37. Brings the required material to the team meetings

Providing/reaction to feedback

38. Personally attacks individuals who provide negative feedback (R)
39. Criticizes others' contributions (suggestions, ideas, and behavior) without offering alternatives (R)
40. Provides constructive feedback to team members for behavioral improvement
41. Says positive things to team members concerning their performance

Performance management

42. Assigns tasks and roles to team members
43. Sets time deadlines for achieving tasks
44. Tells the team how much time they have left to do a task

Mentoring Competency Assessment

Fleming, M., House, M. S., Shewakramani, M. V., Yu, L., Garbutt, J., McGee, R., ... & Rubio, D. M. (2013). The mentoring competency assessment: validation of a new instrument to evaluate skills of research mentors. *Academic medicine: journal of the Association of American Medical Colleges*, *88*(7), 1002.

Please rate how skilled you feel your mentor is in each of the following areas: [We understand that you can only speak from your personal experience. Please try to rate a skill whenever possible, reserving the 'not observed' category for cases where you have no basis for assessment]**.**

Maintaining effective communication

1. Active listening
2. Providing constructive feedback
3. Developing a trusting relationship
4. Accommodating communication styles
5. Pursuing strategies to improve communication
6. Coordinating with other mentors

Aligning expectations

7. Setting clear relationship expectations
8. Aligning expectations
9. Considering mentor–mentee differences
10. Setting research goals
11. Developing strategies to meet goals

Assessing understanding

12. Assessing mentee knowledge
13. Estimating mentee ability
14. Enhancing mentee skills

Fostering independence

15. Motivating mentees
16. Building confidence
17. Simulating creativity
18. Acknowledging mentees' professional contributions
19. Negotiating path to independence

Addressing diversity

20. Accounting for biases and prejudices
21. Accounting for different backgrounds of mentors and mentees

Promoting professional development

22. Helping network effectively
23. Setting career goals
24. Helping establish a work/life balance
25. Understanding impact as role model
26. Helping mentees acquire resources