Source: Lent, R.W., Brown, S.D., Sheu, H., Schmidt, J., Brenner, B.R., Gloster, C.S., Wilkins, G., Schmidt, L., Lyons, H., & Treistman, D. (2005). Social cognitive predictors of academic interests and goals in engineering: Utility for women and students at historically Black universities. Journal of Counseling Psychology, 52, 84-92.

Engineering Fields Questionnaire

Part I. <u>Instructions</u>: The following is a list of major steps along the way to completing an engineering degree. Please indicate how much <u>confidence</u> you have in your ability to complete each of these steps in relation to the engineering major that you are most likely to pursue. Use the 0-9 scale below to indicate your degree of confidence.

| | | No Confidence at all | | Some Confidence | | | | Complete Confidence | | | |
|---|---|----------------------|---|--------------------|---|---|---|------------------------|---|---|---|
| How much confidence do you have in your ability to: | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1. | Complete all of the "basic science" (i.e., math, physics, chemistry) requirements for your engineering major with grades of B or better | • | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2. | Excel in your engineering major over the next semester | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 3. | Excel in your engineering major over the next two semesters | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 4. | Complete the upper level required courses in your engineering major with an overall grade point average of B or better | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Part II. <u>Instructions</u>: Here we are interested in knowing how well you believe you could cope with each of the following barriers, or problems, that students could possibly face in pursuing an engineering major. Please indicate your <u>confidence in your ability to cope with, or solve, each of the following problem situations.</u>

| | | No Confidence at all | | | Some Confidence | | | | Complete Confidence | | |
|----|---|----------------------|---|---|--------------------|---|---|---|------------------------|---|---|
| Но | w confident are you that you could: | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1. | Cope with a lack of support from professor or your advisor. | rs ① | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2. | Complete a degree in engineering despite financial pressures. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 3. | Continue on in engineering even if you did not feel well-liked by your classmates or professors. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 4. | Find ways to overcome communication problems with professors or teaching assistants in engineering courses. | • | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 5. | Balance the pressures of studying for engineering courses with the desire to hav free time for fun and other activities. | е 💿 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 6. | Continue on in engineering even if you felt that, socially, the environment in these classes was not very welcoming to you. | • | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 7. | Find ways to study effectively for engineering courses despite having competing demands for your time. | ng ⑤ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Part III. <u>Instructions</u>: Using the scale below, please indicate the extent to which you agree or disagree with each of the following statements.

| | | Strong Disag | | Disa | agree | Ur | nsure | Αg | gree | Stroi Ag | ngly ree |
|-----|---|-----------------|---|------|-------|----|-------|----|------|-------------|-------------|
| | duating with a BS degree in engineering likely allow me to: | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1. | receive a good job offer | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2. | earn an attractive salary | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 3. | get respect from other people | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 4. | do work that I would find satisfying | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 5. | increase my sense of self-worth | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 6. | have a career that is valued by my family | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 7. | do work that can "make a difference" in | | | | | | | | | | |
| | people's lives | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 8. | go into a field with high employment | | | | | | | | | | |
| | demand | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 9. | do exciting work | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10. | have the right type and amount of contact | | | | | | | | | | |
| | with other people (i.e., "right" for me) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Part IV. <u>Instructions</u>: Now, please indicate your degree of <u>interest</u> in doing each of the following activities. Use the 1-5 scale to show how much interest you have in each activity.

| Ho | w much interest do you have in | Very Low Interest 1 | Low Interest 2 | Medium Interest 3 | High Interest 4 | Very High Interest 5 |
|------------------------|---|---------------------------|----------------------|-------------------------|---------------------------------|----------------------------|
| 1. | Solving practical math problems | 1 | 2 | 3 | 4 | (5) |
| 3. | Reading articles or books about engineering issues Solving computer software problems | 1 | ② ② | ③ ③ | 4)4) | (5) (5) |
| 4. | Working on a project involving engineering principles | 1) | 2 | 3 | 4 | 5 |
| 5. | Solving complicated technical problems | 1 | 2 | 3 | 4 | 5 |
| 6. | Learning new computer applications | 1 | 2 | 3 | 4 | 5 |
| 7. | Working on a project involving scientific concepts | 1 | 2 | 3 | 4 | 5 |

(OVER PLEASE)

Part V. Instructions: Using the scale below, indicate your level of agreement with each of the following statements.

| | | Strongly Disagree | Disagree | Undecided | Agree | Strongly Agree |
|----|---|----------------------|----------|-----------|-------|-------------------|
| | w much do you agree or disagree with the owing statements: | 1 | 2 | 3 | 4 | 5 |
| 1. | I intend to major in an engineering field | 1 | 2 | 3 | 4 | 5 |
| 2. | I plan to remain enrolled in an engineering major over the next semester | 1 | 2 | 3 | 4 | 5 |
| 3. | I think that earning a bachelors degree in engineering is a realistic goal for me | 1 | 2 | 3 | 4 | 5 |
| 4. | I am fully committed to getting my college degree in engineering | 1 | 2 | 3 | 4 | 5 |

Part VI. <u>Instructions</u>: Many factors can either support or hinder students' college and career plans. We are interested in learning about the types of situations that could help or hinder your plans if you were to continue on in the College of Engineering. For the questions below, assume that you wanted to pursue an engineering major. Using the 1-5 scale, show how likely you believe you would be to experience each of the following situations.

| | | Not at All Likely | A Little Likely | Moderately Likely | Quite Likely | Extremely Likely |
|-----|--|----------------------|--------------------|----------------------|-----------------|---------------------|
| | ou were to major in an engineering field, v likely would you be to | 1 | 2 | 3 | 4 | 5 |
| 1. | Have access to a "role model" in this field (i.e., someone you can look up to and learn from by observing) | 1) | 2 | 3 | 4 | (5) |
| 2. | Feel support for this decision from important people in your life (e.g., teachers) | 1) | 2 | 3 | 4 | 5 |
| 3. | Feel that there are people "like you" in this field | 1 | 2 | 3 | 4 | (5) |
| 4. | Get helpful assistance from a tutor, if you felt you needed such help | 1 | 2 | 3 | 4 | (5) |
| 5. | Get encouragement from your friends for pursuing this major | 1 | 2 | 3 | 4 | (5) |
| 6. | Get helpful assistance from your advisor | 1 | (2) | 3 | 4) | (5) |
| 7. | Feel that your family members support this decision | 1) | 2 | 3 | 4 | (5) |
| 8. | Feel that close friends or relatives would be proud of you for making this decision | 1 | 2 | 3 | 4 | (5) |
| 9. | Have access to a "mentor" who could offer you advice and encouragement | 1 | 2 | 3 | 4 | (5) |
| 10. | Receive negative comments or discouragement about your major from family members | 1) | 2 | 3 | 4 | 5 |
| 11. | Worry that such a career path would require too much time or schooling | 1 | 2 | 3 | 4 | (5) |
| 12. | Feel that you don't fit in socially with other students in this major | 1 | 2 | 3 | 4 | (5) |
| 13. | Receive negative comments or discouragement about your major from your friends | 1) | 2 | 3 | 4 | (5) |
| 14. | Feel pressure from parents or other important people to change your major to some other field | 1) | 2 | 3 | 4 | (5) |