College Success Factors Index: Are the Factors Related to Success?

Cypress College
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CSFI

- Student self-report of skills associated with academic success.
  - Assumes that academic success is about intelligence and ability, but also about beliefs and behaviors.
    - Examples of beliefs and behaviors affecting grades.
    - Unlike intelligence and ability, beliefs and behaviors can be modified.
      - Students may not be aware of areas which need improvement.
  - For each student (and each institution), an overall CSFI score is calculated, as well as eight subscales.
  - A higher score on the CSFI indicates negative performance (e.g., higher risk, lower preparedness, lower aptitude).
Subscales

- **Responsibility & Control**: understanding and meeting responsibility, and an internal locus of control
- **Competition**: assertiveness in competition, including competing with one’s own prior success and own expectations
  - Cultural differences?
- **Task Precision**: persistence in tasks (follow-through on goals) and being detail-oriented (including following directions)
  - Descriptions of this area usually focus on commitment to goals (goal-orientation), too.
- **Expectations**: having goals and expecting to reach them (in assignments, course, knowledge-development, and career)
- **Wellness**: depression, anxiety, and stress
- **Time Management**: efficient use of time, planning ahead, following directions, and meeting deadlines
  - Academic success may be a function of both ability and time spent so lower ability students may be most benefited by better time management.
- **College Involvement**: participation in extracurricular activities, having friendships with students, and interacting with faculty.
  - Many theoretical models explaining persistence focus on student involvement.
- **Family Involvement**: parental expectations of success, parents’ value of education, parental interest and praise, as well as parental education level
What can the CSFI tell you?

- Institutional strengths and weaknesses.
- Individual student strengths and weaknesses (or anything in between).
  - Early alert (CSFI’s watchline)
  - If low in one area, counselors can guide students to improve their academic behavior.
    - Your institution likely has resources to aid in each of the areas measured by the CSFI.
      - Examples
    - CSFI authors offer resources, too.
Previous Research with the CSFI

  - CSFI related to GPA.
  - Students with CSFI scores below watchline are not likely to return the next term or they earn a GPA below 2.0 in the next term.
  - CSFI scores can be improved through curricular interventions.

  - Five factors found:
    - Time management subscale and Task precision subscale
    - Family involvement subscale
    - Competition
    - College involvement
    - Expectations composite
  - Retention was not affected by taking the CSFI.
  - Persistence was only related to one subscale, and that was in the “wrong” direction: Students scoring as “at-risk” on the Family Involvement subscale were more likely to persist.

- Rudmann, J. (1990s)
  - Time management was related to short-term academic outcomes (units earned, units earned/units attempted),
CSFI Statistics

- 80 questions, 10 per subscale
- Internal Reliability
  - Cronbach’s alpha is generally .90+
  - Subscales have much lower reliabilities
- Correlation with GPA ranges from .30 to .50
- Norm group is at least 14,000+ students.
- Watchline is one standard deviation from the mean
  - About 15% of each sample “should” be in this risk area.
    - Scores above 220 are very high risk (2 SDs above mean).

<table>
<thead>
<tr>
<th>CSFI Subscale</th>
<th>Norm Score</th>
<th>Watchline</th>
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<tbody>
<tr>
<td>Responsibility &amp; Control</td>
<td>21</td>
<td>25</td>
</tr>
<tr>
<td>Competition</td>
<td>20</td>
<td>24</td>
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<td>Task Precision</td>
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<td>Expectations</td>
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<td>College Involvement</td>
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<td>Family Involvement</td>
<td>19</td>
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<tr>
<td><strong>Total Score</strong></td>
<td><strong>173</strong></td>
<td><strong>202</strong></td>
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Analyzing the CSFI

- Three metrics
  - CSFI score
  - But…
  - Watchline
  - Taking it versus not.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Cypress College Internal Reliability</th>
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<tbody>
<tr>
<td>Responsibility &amp; Control</td>
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<td>Competition</td>
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<td>Family Involvement</td>
<td>.79</td>
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<tr>
<td>Total Score</td>
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Sample Characteristics

Out of the 1264 students in the target (mostly developmental English) course sections, 669 completed the inventory (52.9%).

- First generation college students = 42%
- First-time freshman (in spring) = 19%
  - These students were also more likely to take the CSFI.
- Average GPA = 2.3

- Gender
  - 51% women
  - 43% men

- Age
  - Average = 22
  - Median = 19
  - Range = 17 - 56

- Ethnicity
  - Hispanic = 38%
  - Asian/Pacific Islander = 29%
  - White = 17%
  - African American = 6%
# Student Characteristics & CSFI Scores

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<tr>
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<th>Ethnicity</th>
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**Conclusion**

- In this sample, women are more organized, but men have personality traits that are more effective for academic success.
- Black and Asian students are more competitive and more involved.
- Older students manage their time better than younger students.
- First generation students are less involved in the college, and have less involved families.
- First time freshman are less involved in campus activities.
Grade Point Average & CSFI Scores

- Students with higher GPAs are more likely to take the CSFI.
- What could it mean that the CSFI and GPA are so related?

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**Conclusion**: GPA and CSFI scores are highly related.

0 = ns
+ = significant relationship
Higher GPAs are always a stronger predictor of visiting a counselor to discuss CSFI results than are actual CSFI scores.

- Only College Involvement was still significant when GPA was included in the equation.

Some successful academic behaviors predict visiting CSFI counselors.

0 = ns
+ = significant relationship
GPAs are always a stronger predictor of performance than is the CSFI.
Retention is related to taking the CSFI, and to the Task Precision subscale.

Success is related to taking the CSFI, and two subscales
- Responsibility and Control
- Wellness
Although visiting a counselor predicted all three performance indicators, it also interacted with GPA:

- Students with higher GPAs who visited a counselor were more likely to:
  - Not withdraw from the course
  - To be successful in their course
  - To persist to the following fall term.
- GPA is always the stronger predictor.
GPAs are always a stronger predictor of performance and persistence than is the CSFI.

Retention is related to taking the CSFI and to one subscale.

Success is related to taking the CSFI and two subscales.

All three performance indicators were higher for students with higher GPAs and who visited a counselor:
- GPA is always the stronger predictor.

But...
Conclusion

- The subscales have low internal reliability, *and*...
- Cumulative GPA is a better predictor of retention, success, and persistence, *but*…
- Students who complete the CSFI are more likely to be successful than students who choose not to take it, *and*…
- (Higher) GPA and attending a counseling session *interact* to predict retention, success, and persistence, *so*…

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What now?

- Students should take the CSFI.
  - If they take it (and have higher GPAs), then they should visit a counselor.

- Faculty and counselors can provide targeted resources for students to improve deficient academic behaviors described by their CSFI results.

- With caution, the CSFI may be used as:
  - An early alert mechanism
  - Predictor of success
  - An intervention to improve success

- How could the CSFI be incorporated into a model to improve student success?