



Validation of the USF Student/Faculty Teaching Effectiveness Survey

A Presentation to
USF Faculty

by

**Online Student Survey
Implementation Task Force**



16 & 22 October 2014

Beta Testing

2013-14 School Year

- Survey was built around **four constructs of Teaching Effectiveness**, based on faculty survey and the literature: *Instructional Design, Instructional Practices, Student Engagement, and Student Learning*
- Students received emails with link to their courses to evaluate
- Fall 2013 Beta Test was presented in random order
 - Questions did not validly measure constructs
- Spring 2014 Beta Test was organized by constructs
 - Construct validity was achieved—Bill Murry will explain Psychometric Analysis:
 - 36 Spring Beta questions across four constructs
 - 13 questions which optimally measure the four constructs



Our Goals

- **Reliability** - a measure is said to have high **reliability** if it produces consistent results under similar conditions.
- **Construct** - the extent to which operationalization's of a construct actually measures what it intends to measure.
- **Efficiency** - the ability to achieve reliability and validity while maximizing response rates with the least number of items.



Survey Constructs

Instructional Design

The following questions refer to Instructional Design – the planning, structure, and organization of the course.

Student Engagement

The third set of questions relate to Student Engagement – the active exchange and involvement of instructor and students in the course.

Instructional Practices

The second set of questions refer to Instructional Practices – what students experience when they attend class, and the effectiveness of teaching methods used in class.

Student Learning

The fourth set of questions relate to Student Learning – the increase in students' knowledge and abilities, and whether the learned skills are transferable to other subjects.

Teaching Effectiveness Survey for [Course Subject and Number]

Instructional Design

The following questions refer to Instructional Design
—the planning, structure, and organization of the course.

Please indicate your level of agreement or disagreement with the following items.

Questions pertaining to [\$\$NAME]	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Comments
1. The learning outcomes for this course were clearly stated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
2. Student responsibilities in this course were clearly defined.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
3. The course schedule was clearly laid out.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
4. Criteria for assessing performance in this course were clearly stated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>

Please click "NEXT" or ► to continue...

Save Previous Next Submit

Progress 20%

Mobile Version | Standard Version



Features of Online Surveys

From a Student's Perspective

- Online response is more natural for today's students
- Opportunity for students to provide anonymous comments to faculty on each item
- Students may save their responses mid-completion and return to finish later
- Survey is accessible on smartphones and tablets
 - Survey dynamically resizes to fit the pertinent device's screen.
- Students may also access Blue from within Banner Student Self-Service and Canvas.



Features of Online Surveys

From a Faculty Member's Perspective

- **Speed of Feedback**

- Reports available in time for subsequent improvement in faculty teaching effectiveness.
- Note: Faculty must submit their grades before getting access to their reports.

- **Usefulness of Feedback**

- **Construct based:** Faculty will receive feedback on empirically-driven constructs.
 - Identify issues with specific constructs.
 - Faculty have opportunities to make improvements to specific constructs of teaching effectiveness.
- Faculty can receive valuable student feedback through comments related to each survey question.



Achieving High Response Rates

- **Notification:** Students receive automatic email reminders until they complete surveys for all of their courses
 - **Class time:** Faculty should set aside class time (as with SUMMAs); students bring smartphone/tablet/laptop to class on survey day
 - **Talk about it:** Faculty should discuss changes they made with subsequent classes
 - The speed of feedback makes improvement in teaching effectiveness possible for *subsequent semester*
 - Addresses major concern of USF students: “Does anyone read our responses?”
- ➔ Peer institutions have achieved 80+% response rates



Transition to Blue



Can I compare Blue to SUMMA?

No





Transition to Blue

- The new survey was developed to capture USF values
- The new survey provides a measure of constructs of teaching effectiveness
 - Other evidence includes instructional materials, invited presentations in colleagues' classes, curriculum development, publications on teaching methods, etc. (*Article 17.9.6, FT CBA*).
- The Provost and Faculty Associations have agreed to form an ad hoc committee to review and provide guidance to Peer Review Committees on Blue results
- Faculty should be encouraged to consider the four constructs in planning their classes, beginning in Spring 2015

The Process

- Created new theory driven instrument based on Teaching Effectiveness
 - Initial item set: 36 items, 4 factors
- Exploratory Factor Analysis (EFA) - Item reduction (N=~2390):
 - Item and scale reliability analysis
 - 27 items, 4 factors
- Confirmatory Factor Analysis (CFA) Item reduction (N=~2390):
 - Initial model: 27 items, 4 factors
 - Model comparisons
 - Final model: 13 items, 4 factors
- Hierarchical Model Analysis: 2nd order factor
 - 2nd order factor model
 - Model comparison



Moving Forward

- Go LIVE spring 2015
 - Continue to test experimental items
- Continue CFA
- Validation on sub-groups (gender, ethnicity, etc.)
- Develop instrument norms



Thank You
Questions?



Spring 2014 Beta Test Finalized Questionnaire in Construct Order (No Reverse Coded Questions)

The survey questions below are written to address some aspect of teaching effectiveness. They are written syntactically to align with the following specific response set:

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 4. Somewhat agree |
| 2. Disagree | 5. Agree |
| 3. Somewhat disagree | 6. Strongly agree |

This response set is designed to eliminate any neutral point and to force the respondent to make a choice in a specific perceptual direction (negative or positive) with three directional levels of magnitude each in those perceptions.

Overlap of survey questions from one construct to another is acceptable if the survey questions are addressing conceptually separate intent related to the specific construct, e.g., item 1 under Instructional Design, Instructional Practices, and Student Learning are addressing the student learning outcomes in a conceptually different manner. Conceptual overlap within a construct is also acceptable to assure the validity of the construct if there is enough perceived difference in the survey questions to be meaningful. Note:

Construct definitions below are for clarity purposes only and will NOT become part of the survey.

Instructional Design:

Instructional design refers to the planning, structure and organization of the course, and whether the course possesses instructional features commonly viewed as being important to student learning. Were the learning outcomes and requirements clear, were the course materials relevant and useful, and were assignments well scheduled and relevant?

1. The learning outcomes for this course were clearly stated.
2. The assignments were helpful in accomplishing the learning outcomes for this course.
3. The assignments were well integrated throughout the course.
4. Directions/guidelines for assignments were clearly stated.
5. Student responsibilities in this course were clearly defined.
6. The course schedule was clearly laid out.
7. Criteria for assessing performance in this course were clearly stated.
8. Criteria for assessing the completion of the learning outcomes were clearly stated.
9. Course materials were effective in accomplishing the student learning outcomes.
10. Topics that were covered have relevance beyond this course.

Instructional Practices:

Instructional practices refer to what is experienced by students when they attend class. Were the teaching methods effective, was the class atmosphere supportive, and was feedback timely?

1. I was able to track my progress in the course.
2. Teaching methods were effective for promoting learning.
3. The methods for assessing work were appropriate.
4. The course atmosphere was respectful of all students.
5. The course's subject matter was covered in a clear manner.
6. Course sessions were well prepared.
7. Course time was used effectively.
8. The course schedule was followed, any changes were clearly communicated.
9. The course was well organized.
10. Feedback in this course was timely.
11. The relevance of course topics was discussed.

Spring 2014 Beta Test Finalized Questionnaire in Construct Order (No Reverse Coded Questions)

Student Engagement:

Student engagement refers to the motivation and active involvement of students in the course. Did the instructor encourage student participation and self-responsibility, communicate with students effectively, and demonstrate willingness to help students?

1. The instructor was accessible to students outside of class.
2. Communication with the instructor was effective.
3. Instructional activities contributed to my desire to actively engage in this course.
4. The feedback I received in this course was helpful.
5. This course stimulated my interest in the subject matter.
6. This course motivated me to learn.
7. Students were encouraged to take responsibility for their own learning.
8. Students were encouraged to share their ideas and knowledge.

Student Learning:

Student learning refers to the outcomes of the course, regarding new knowledge, as well as subject-related skills and general abilities, including thinking and reasoning skills. Did the course increase students' knowledge and abilities, are the learned skills transferrable to other subjects?

1. I increased my knowledge in this subject as indicated by the course learning outcomes.
2. I increased my skills in this subject as indicated by the course learning outcomes.
3. I increased my ability to integrate my knowledge and skills in this subject as indicated by the course learning outcomes.
4. Strategies for learning (learning how to learn) in this course are transferable to other subjects.
5. This course contributed to my understanding of the subject matter.
6. I am able to demonstrate my knowledge/skills in this subject matter.
7. This course helped me improve strategies for learning (learning how to learn).

Scale Reliability Analysis: (N=4780)

Scale: Instructional Design

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.948	.948	10

Scale: Student Engagement

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.920	.920	8

Scale: Instructional Practices

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.937	.938	11

Scale: Student Learning

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.957	.958	7



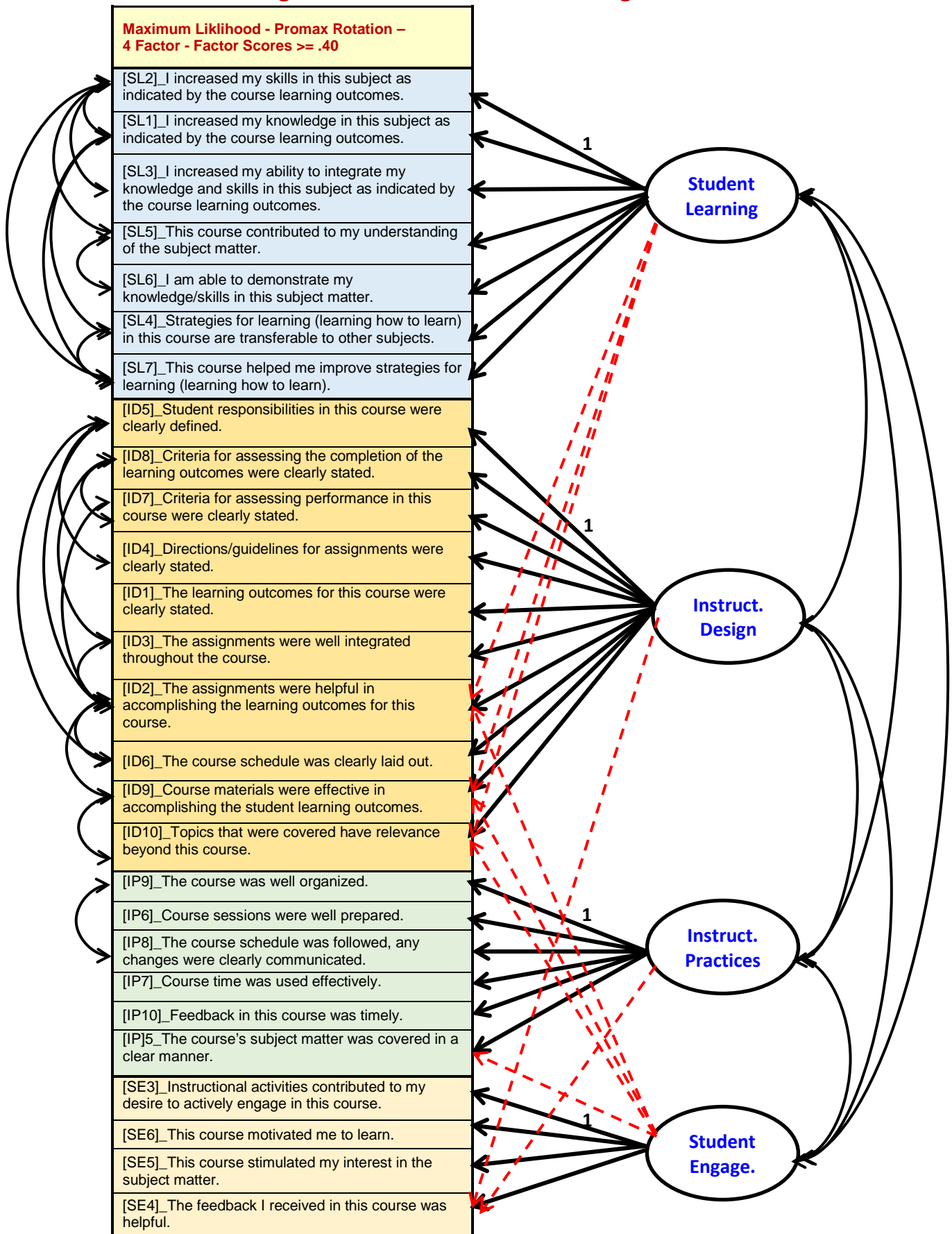
Spring 2014 Student Faculty
Exploratory Factor Analysis
Factor Structures

Pattern Matrix^a

Maximum Likelihood - Promax Rotation - 4 Factor - Factor Scores >= .40	Factor			
	1	2	3	4
[SL2]_ I increased my skills in this subject as indicated by the course learning outcomes.	.984			
[SL1]_ I increased my knowledge in this subject as indicated by the course learning outcomes.	.960			
[SL3]_ I increased my ability to integrate my knowledge and skills in this subject as indicated by the course learning outcomes.	.916			
[SL5]_ This course contributed to my understanding of the subject matter.	.831			
[SL6]_ I am able to demonstrate my knowledge/skills in this subject matter.	.757			
[SL4]_ Strategies for learning (learning how to learn) in this course are transferable to other subjects.	.637			
[SL7]_ This course helped me improve strategies for learning (learning how to learn).	.604			
[SE7]_ Students were encouraged to take responsibility for their own learning.				
[ID5]_ Student responsibilities in this course were clearly defined.		.865		
[ID8]_ Criteria for assessing the completion of the learning outcomes were clearly stated.		.860		
[ID7]_ Criteria for assessing performance in this course were clearly stated.		.856		
[ID4]_ Directions/guidelines for assignments were clearly stated.		.776		
[ID1]_ The learning outcomes for this course were clearly stated.		.753		
[ID3]_ The assignments were well integrated throughout the course.		.731		
[ID2]_ The assignments were helpful in accomplishing the learning outcomes for this course.		.717		
[ID6]_ The course schedule was clearly laid out.		.644		
[ID9]_ Course materials were effective in accomplishing the student learning outcomes.		.640		
[ID10]_ Topics that were covered have relevance beyond this course.		.504		
[IP3]_ The methods for assessing work were appropriate.				
[IP9]_ The course was well organized.			.859	
[IP6]_ Course sessions were well prepared.			.836	
[IP8]_ The course schedule was followed, any changes were clearly communicated.			.733	
[IP7]_ Course time was used effectively.			.664	
[IP10]_ Feedback in this course was timely.			.554	
[IP5]_ The course's subject matter was covered in a clear manner.			.445	
[SE2]_ Communication with the instructor was effective.				
[IP4]_ The course atmosphere was respectful of all students.				
[IP1]_ I was able to track my progress in the course.				
[IP11]_ The relevance of course topics was discussed.				
[SE1]_ The instructor was accessible to students outside of class.				
[SE3]_ Instructional activities contributed to my desire to actively engage in this course.				.571
[SE6]_ This course motivated me to learn.	.468			.563
[SE5]_ This course stimulated my interest in the subject matter.	.488			.561
[SE4]_ The feedback I received in this course was helpful.				.416
[SE8]_ Students were encouraged to share their ideas and knowledge.				
[IP2]_ Teaching methods were effective for promoting learning.				

SEM Exploratory Results

Showing Covariance's and Cross Loadings for Model 1

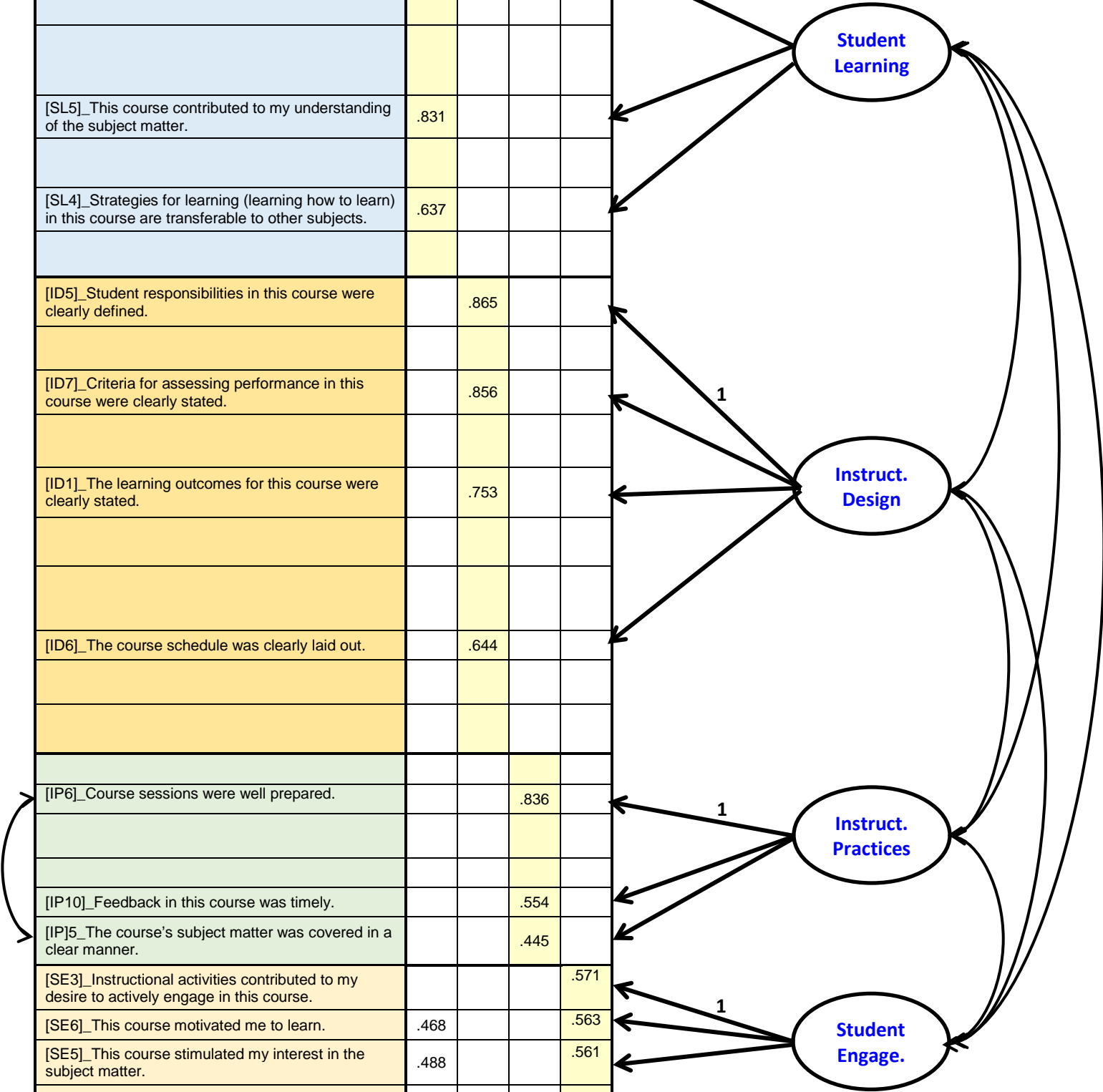


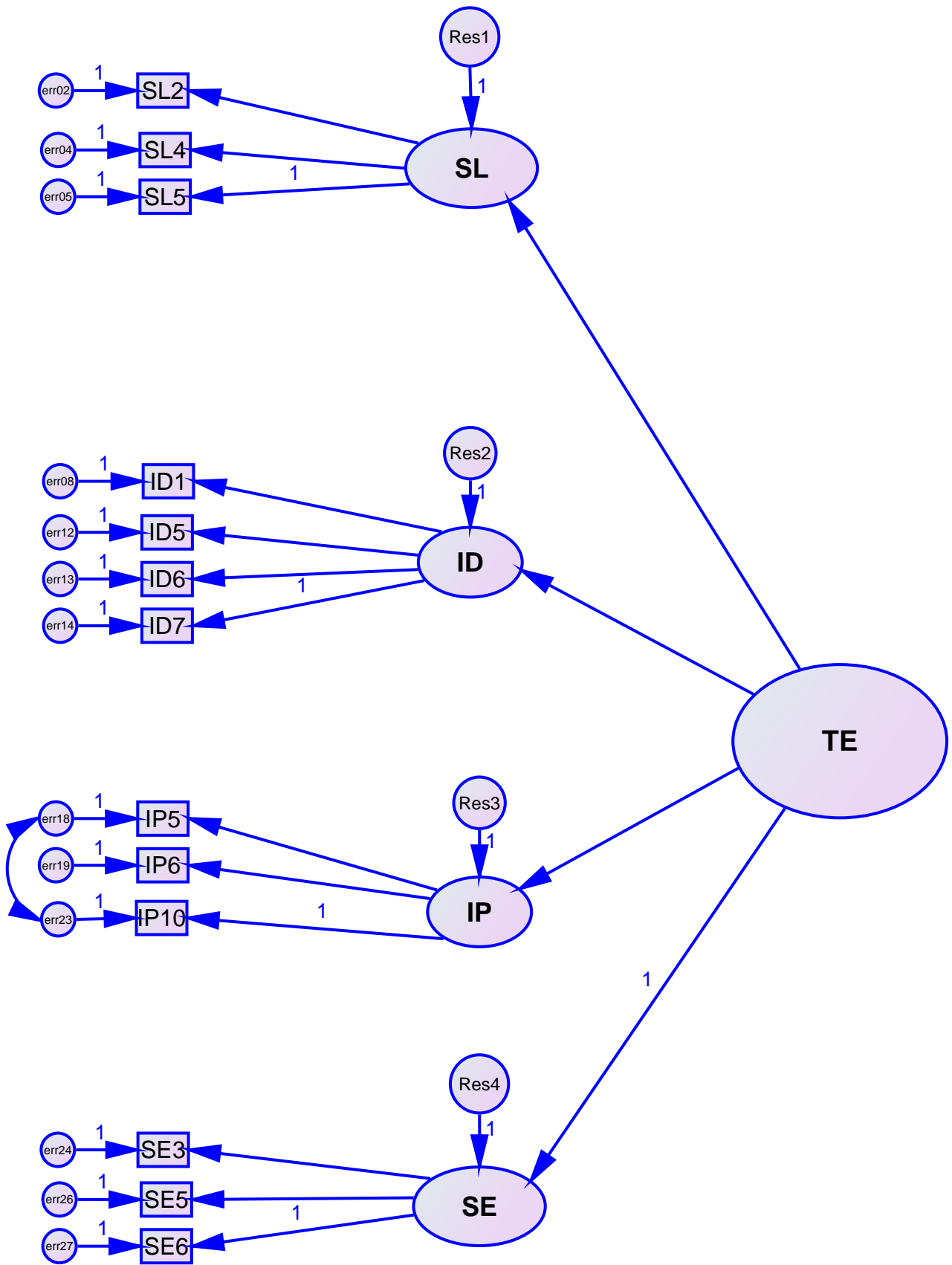
SEM Iterative Model Comparisons

MODEL Parameters	Chi Sq. Small/ns	RMR ~<.050	GFI ~>.950	CFI ~>.950	RMSEA ~<.050	Pclose ns
1	6701.8	.062	.822	.925	.084	.000
2	4784.3	.063	.849	.938	.080	.000
3	3356.2	.060	.875	.944	.082	.000
4	994.4	.060	.875	.944	.082	.000
5	542.6	.035	.971	.985	.054	.000

MODEL 6: SEM Exploratory Results

Maximum Likelihood - Promax Rotation – 4 Factor - Factor Scores >= .40	Factor			
	1	2	3	4
[SL2]_I increased my skills in this subject as indicated by the course learning outcomes.	.984			
[SL5]_This course contributed to my understanding of the subject matter.	.831			
[SL4]_Strategies for learning (learning how to learn) in this course are transferable to other subjects.	.637			
[ID5]_Student responsibilities in this course were clearly defined.		.865		
[ID7]_Criteria for assessing performance in this course were clearly stated.		.856		
[ID1]_The learning outcomes for this course were clearly stated.		.753		
[ID6]_The course schedule was clearly laid out.		.644		
[IP6]_Course sessions were well prepared.			.836	
[IP10]_Feedback in this course was timely.			.554	
[IP5]_The course's subject matter was covered in a clear manner.			.445	
[SE3]_Instructional activities contributed to my desire to actively engage in this course.				.571
[SE6]_This course motivated me to learn.	.468			.563
[SE5]_This course stimulated my interest in the subject matter.	.488			.561





SEM 2nd Order Model Comparison

MODEL	Chi Sq.	RMR	GFI	CFI	RMSEA	Pclose
Parameters	Small/ns	~<.050	~>.950	~>.950	~<.050	ns
1	6701.8	.062	.822	.925	.084	.000
2	4784.3	.063	.849	.938	.080	.000
3	3356.2	.060	.875	.944	.082	.000
4	994.4	.060	.875	.944	.082	.000
5	542.6	.035	.971	.985	.054	.000
2nd Order Model	1000.8	<u>.065</u>	.945	.971	<u>.074</u>	.000