An Analysis of Excess SCH Accumulation and Impact on Student Outcomes

Presented by: Vyas Krishnamurthy and Carmen Allen
University of Houston, Office of Institutional Research

TEXAS ASSOCIATION FOR INSTITUTIONAL RESEARCH

41ST ANNUAL CONFERENCE, HORSESHOE BAY, TEXAS

FEBRUARY 25-28, 2019

PRESENTATION OVERVIEW

- Background Information
- Description of Study and Findings
- Conclusions
- Next Steps
- Discussion

BACKGROUND INFORMATION

- University of Houston
  - Founded in 1927
  - Flagship of the University of Houston System
  - Public, Tier One research university
  - 300+ undergraduate, graduate and professional programs
  - Fall 2018 enrollment: 46,324

INSTITUTIONAL RESEARCH

- 7 staff members, 1 research assistant
- Responsibilities
  - Official university reporting
  - Institutional research and analyses
  - Design and maintenance of databases
  - Maintenance of comparative resource materials

REASONS FOR STUDY

- Update to previous study (2014)
  - #1: Does UH still have high average SCH at graduation compared to peer institutions in Texas?
  - #2: Is there still a significant interaction between transfer SCH and transfer GPA in terms of timely graduation?
  - #3: Are there differences between groups in the degree to which transfer SCH becomes problematic, if at all?
- **Goal: Inform further research, program planning, and interventions leading to timely graduation and efficient use of SCH**

THE STUDY

- Conducted several analyses, each building on previous phases of analysis
  - **Phase 1:** Is there still differential SCH accumulation among graduating students?
  - **Phase 2:** Is high SCH accrual still associated with a lower probability of graduating?
  - **Phase 3:** Is the lower probability of graduating associated with excess SCH different for various student groups?

ISSUE #1: HIGH SCH AT GRADUATION

Institution	Average SCH Attempted at Graduation (FY2011)	Average SCH Attempted at Graduation (FY2018)
Texas A&M	137.34	136.88
Texas Tech	145.85	146.87
UT-Austin	131.34	131.47
UH	**150.62**	**145.65**

Why are UH students accumulating so many hours?

DATASET #1: RECENT GRADUATES

- Students who earned an undergraduate degree in FY2011 (now FY2018)
- Excluded post-baccalaureate students and those earning multiple degrees
- Included: admission status (FTIC or transfer), SCH at graduation, SCH required for degree, efficiency ratio
- Source: CBM009

PHASE 1 FINDINGS

- Used the ***Recent Graduates*** file
- Examined differences in SCH accumulation among FTICs/transfers and among colleges, departments
- Also considered who might be more at risk with a lower SCH cap

✓ **Transfer students accumulate the most SCH**

FY2011 Bachelor Degree Recipients Exceeding SCH Required for Degree by At Least 15 SCH and 30 SCH

College	Range of SCH Required	Students with 15+ SCH Over						Students with 30+ SCH Over					
		Total		FTIC		Transfer		Total		FTIC		Transfer	
		N	%	N	%	N	%	N	%	N	%	N	%
Architecture	128—160	39	60.0	8	28.6	31	83.8	28	43.1	5	17.9	23	62.2
Business	120	843	79.6	305	73.1	538	83.8	531	50.1	165	39.6	366	57.0
Education	120—124	296	83.2	97	78.9	199	85.4	191	53.7	57	46.3	134	57.5
Engineering	127—134	182	77.5	69	61.6	113	91.9	106	45.1	23	20.5	83	67.5
HRM	120	189	74.1	63	54.8	126	90.0	118	46.3	32	27.8	86	61.4
CLASS	120	1,358	72.6	451	64.1	907	77.7	881	47.1	271	38.5	610	52.3
NSM	120	372	79.7	180	73.8	192	86.1	264	56.5	103	42.2	161	72.2
Pharmacy	120	24	88.9	15	93.8	9	81.8	15	55.6	7	43.8	8	72.7
Technology	120—124	360	89.6	123	83.1	237	93.3	282	70.2	88	59.5	194	76.4
University Total	120—160	3,663	77.3	1,311	68.8	2,352	83.1	2,416	51.0	751	39.4	1,665	58.8

Note: Excludes post-baccaluareate students and those earning multiple degrees in FY2011.

FY2018 Bachelor Degree Recipients Exceeding SCH Required for Degree by At Least 15 SCH and 30 SCH

College	Range of SCH Required	Students with 15+ SCH Over						Students with 30+ SCH Over					
		Total		FTIC		Transfer		Total		FTIC		Transfer	
		N	%	N	%	N	%	N	%	N	%	N	%
Architecture	128—160	30	42.9	6	26.1	24	51.1	18	25.7	3	13.0	15	31.9
Arts	120	131	66.8	65	66.3	66	67.4	77	39.3	43	43.9	34	34.7
Business	120	505	34.8	157	29.4	348	38.0	177	12.2	45	8.4	132	14.4
Education	120	277	60.9	61	40.9	216	70.6	139	30.6	22	14.8	117	38.2
Engineering	125—121	430	64.5	147	46.1	283	81.3	206	30.9	58	18.2	148	42.5
HRM	120	126	49.0	23	26.4	103	60.6	54	21.0	7	8.1	47	27.7
CLASS	120	671	32.3	202	30.4	469	33.2	263	12.7	74	11.1	189	13.4
NSM	120—121	457	56.4	243	50.6	214	64.9	213	26.3	98	20.4	115	34.9
Nursing	120—121	34	100.0	12	100.0	22	100.0	30	88.2	12	100.0	18	81.8
Technology	120—124	566	58.2	115	41.5	451	64.8	255	26.2	36	13.0	219	31.5
University Total	120—160	3,227	46.1	1,031	39.0	2,196	50.5	1,432	20.5	398	15.1	1,034	23.8

Note: Excludes post-baccaluareate students and those earning multiple degrees in FY2018.

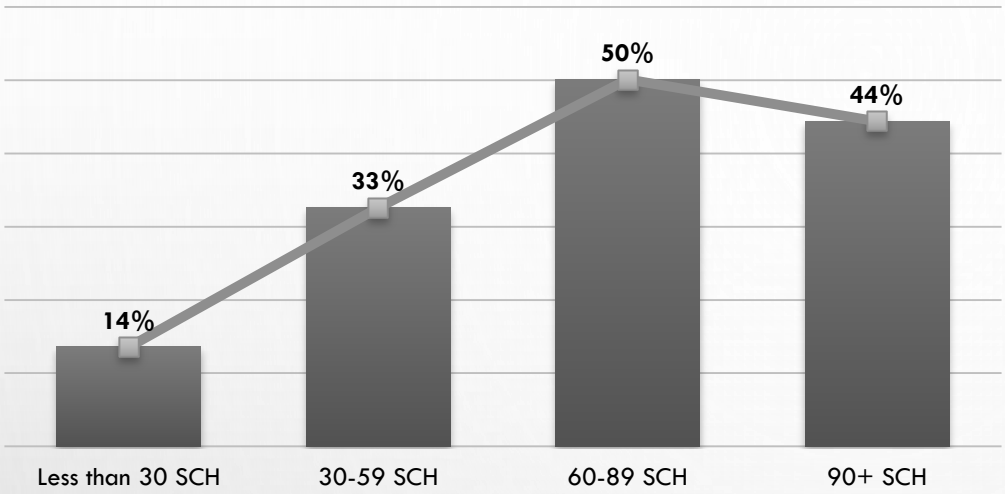
DATASET #2: COHORT TRACKING DATA

- Undergraduate students who transferred to UH in Fall 2008 (updated to Fall 2014)
- Included: transfer institution, transfer GPA, total hours transferred, SCH accumulation, persistence, graduation
  - If a degree was earned within four years, degree information was included
- Source: Institutional data, CBM009

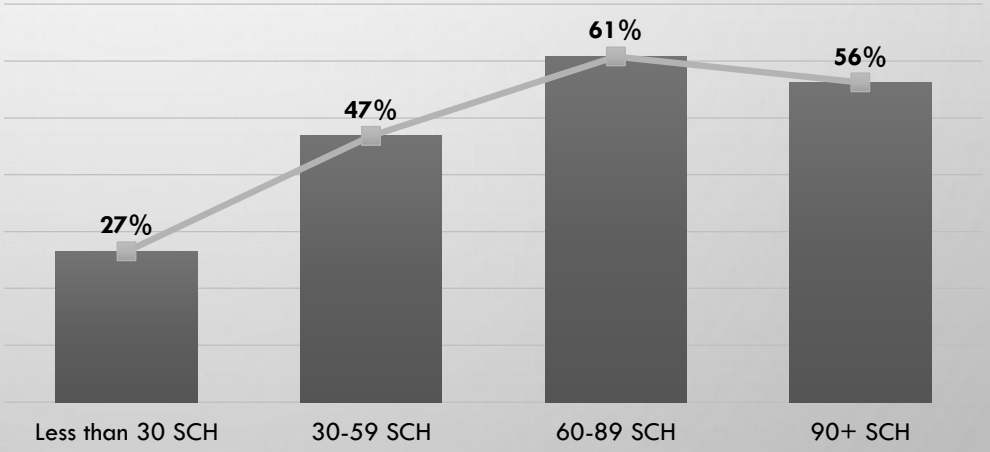
PHASE 2 FINDINGS

- Used the ***Cohort Tracking*** dataset
- Examined whether high SCH accrual is still associated with a lower probability of graduating
- **The relationship between very high SCH at transfer is still associated with lower graduation success**

Percent Graduated by SCH Ranges (2008 Cohort)

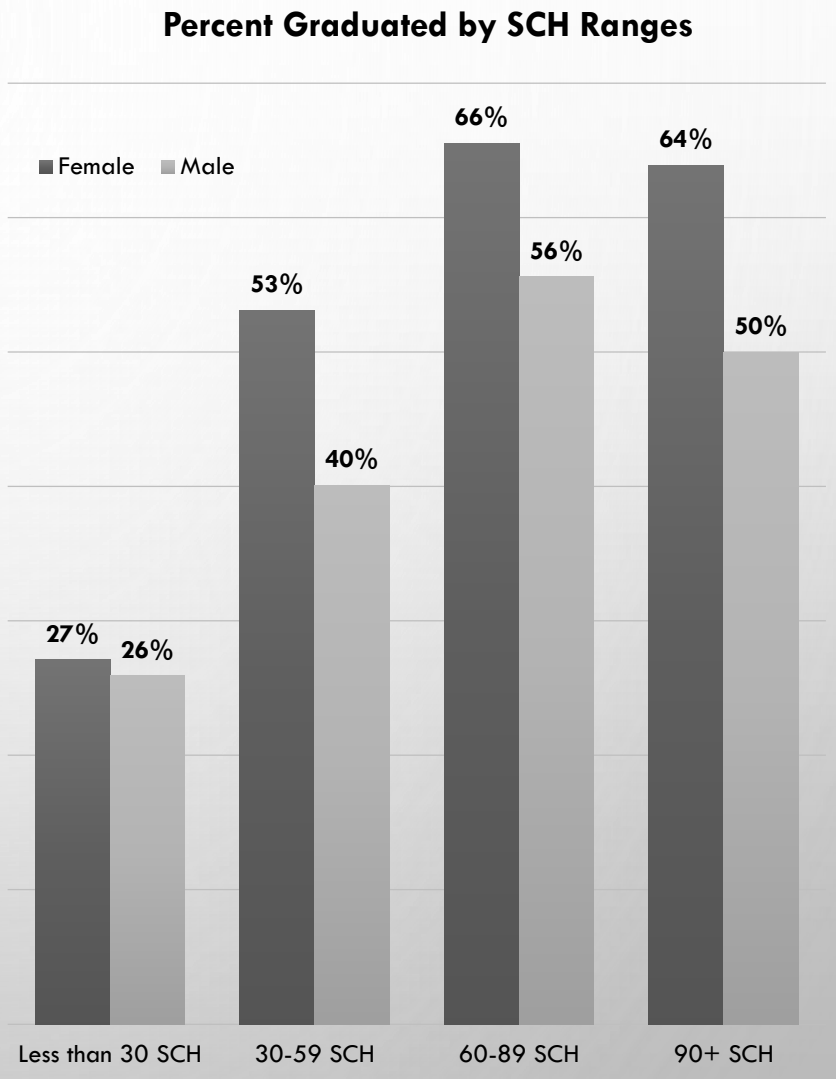


Percent Graduated by SCH Ranges (2014 Cohort)

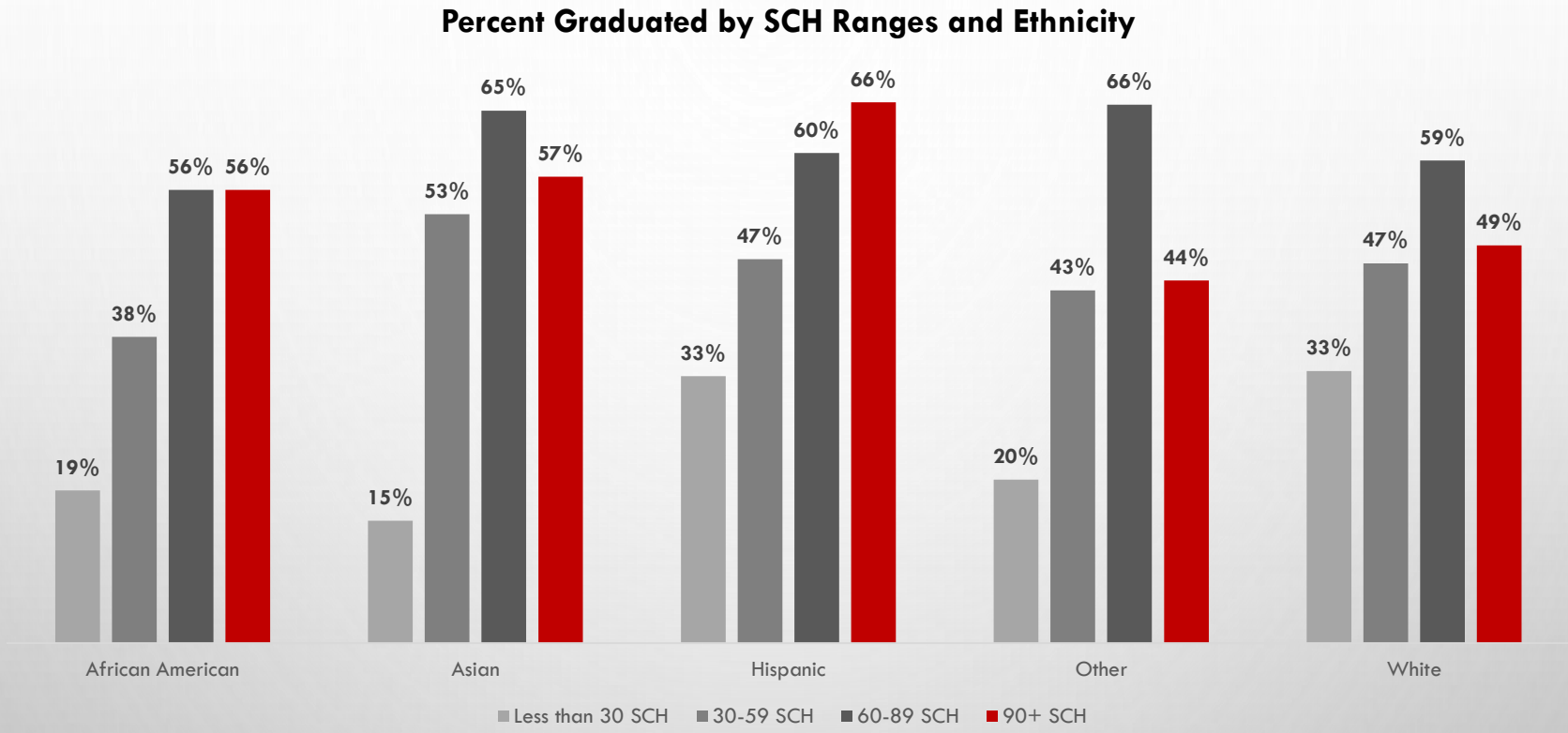


GENDER COMPARISON

		Did not graduate		Graduated		All
		N	%	N	%	N
Female	Less than 30 SCH	67	72.8%	25	27.1%	92
	30-59 SCH	361	46.8%	410	53.1%	771
	60-89 SCH	280	34.4%	532	65.5%	812
	90+ SCH	44	36.0%	78	63.9%	122
	All	**752**	**41.8%**	**1,045**	**58.1%**	**1,797**
Male	Less than 30 SCH	80	74.0%	28	25.9%	108
	30-59 SCH	436	59.8%	293	40.1%	729
	60-89 SCH	316	44.3%	396	55.6%	712
	90+ SCH	74	50.0%	74	50.0%	148
	All	**906**	**53.3%**	**791**	**46.6%**	**1,697**
All		**1,658**	**47.4%**	**1,836**	**52.5%**	**3,494**



ETHNICITY COMPARISON



CONCLUSIONS

Q: Is there still differential SCH accumulation among graduating students?

A: *Yes – transfer students still accumulate more SCH, though the SCH accumulated has decreased*

Q: Is high SCH accrual still associated with a lower probability of graduating?

A: *Yes – graduation probabilities remain lower for students with a large number of transfer SCH (90+)*

Q: Is the lower probability of graduating associated with excess SCH different for some student groups?

A: *Yes – excess SCH appears to have a larger effect on males than females. Additionally, excess SCH has less of an effect – or the opposite effect – for African American and Hispanic students in the sample.*

NEXT STEPS

- University efforts to minimize SCH at graduation
  - UH in 4
  - Houston GPS
- Examine differences between additional groups and include more variables in analysis
- Decision-tree/CHAID modeling to see if the “tipping point” differs by student characteristics

Questions?