MidAIR Forum, Nov 15, 2019, Columbia MO

When the Undergraduate Admission Policy Does Not Apply

Ronald D. Thompson, PhD, Sr. Research Analyst

Office of Institutional Research

University of Missouri System

When the Undergraduate Admission Policy Does Not Apply

Ronald D. Thompson, PhD, UM Sr. IR Analyst

Abstract:

The undergraduate admission policy of a large, public, Midwestern university is based on an applicant's ACT percentile rank, high school graduation class percentile rank, and whether or not the applicant has completed a suite of high school core courses. This presentation discusses how this policy might be altered to apply to applicants who do not have these three admissions policy components.

When the Undergraduate Admission Policy Does Not Apply
Ronald D. Thompson, PhD, UM Sr. IR Analyst

Outline:

1. Intro: UM Undergraduate Admission Policy
2. The issue
3. The implication
4. "Legacy" solution (Dr. Joe Saupe, c. 2003)
5. Possible other solutions
6. Summary and conclusion

UM Admission Policy for FTC, Full-time, Degree-seeking U/G.
*** Basic ***

Automatic admission to UM if:

- (a) took ACT/SAT, (b) completed UM's HS core course requirements, and (c) graduated *recently* from an accredited high school, ***and either***

- Score >= 24 on ACT, ***or***
- Satisfy "120 Rule" (%ACT + HS Grad Class %Rank >= 120)*, or*

- Grad from a *ranking* MO high school & HS Grad Class %Rank >= 90, ***or***
- Grad from a *non-ranking* MO high school & HS Core Course GPA >= 3.5/4.0 .

UM's HS Core Course Requirements

1. Took >= 4 yrs of HS English
2. Took >= 4 yrs of HS Math
3. Took >= 3 yrs of HS Science
4. Took >= 3 yrs of HS Social Studies
5. Took >= 1 yr of HS Visual/Performing Arts
6. Took >= 2 yrs of the same HS Foreign Language

The Issue

UM FT, DS, FTC, undergraduates, recent grad, took UM-req HS core courses, took ACT/SAT.			
	FS2009	**FS2014**	**FS2019**
Have HS %Rank	5,226	4,673	3,480
Do NOT	1,201	2,509	2,810
	18.7%	**34.9%**	**44.7%**
TOTAL	6,427	7,182	6,290

The Issue: A Closer Look

	FS2009	FS2014	FS2019
UM FT, DS, FTC, undergraduates, recent grad, took UM-req HS core courses, took ACT/SAT. <mark>***** Remove ACT >= 24 *****</mark>			
Have HS %Rank	1,527	1,263	928
Do NOT	277 **15.4%**	597 **32.1%**	745 **44.5%**
TOTAL	1,804	1,860	1,673

Legacy *Approach*: Dr. Joe Saupe c. 2003: Step #1

"120 Rule" Restated			
ACT	ACT %Rank (rptd 2018-19)	Minimum HS %Rank	TOTAL
>= 24			
23	69	51	120
22	63	57	120
21	58	62	120
20	51	69	120
19	45	75	120
18	39	81	120
17	32	88	120
16	26	94	120
15	20	100	120
14	14	106	120

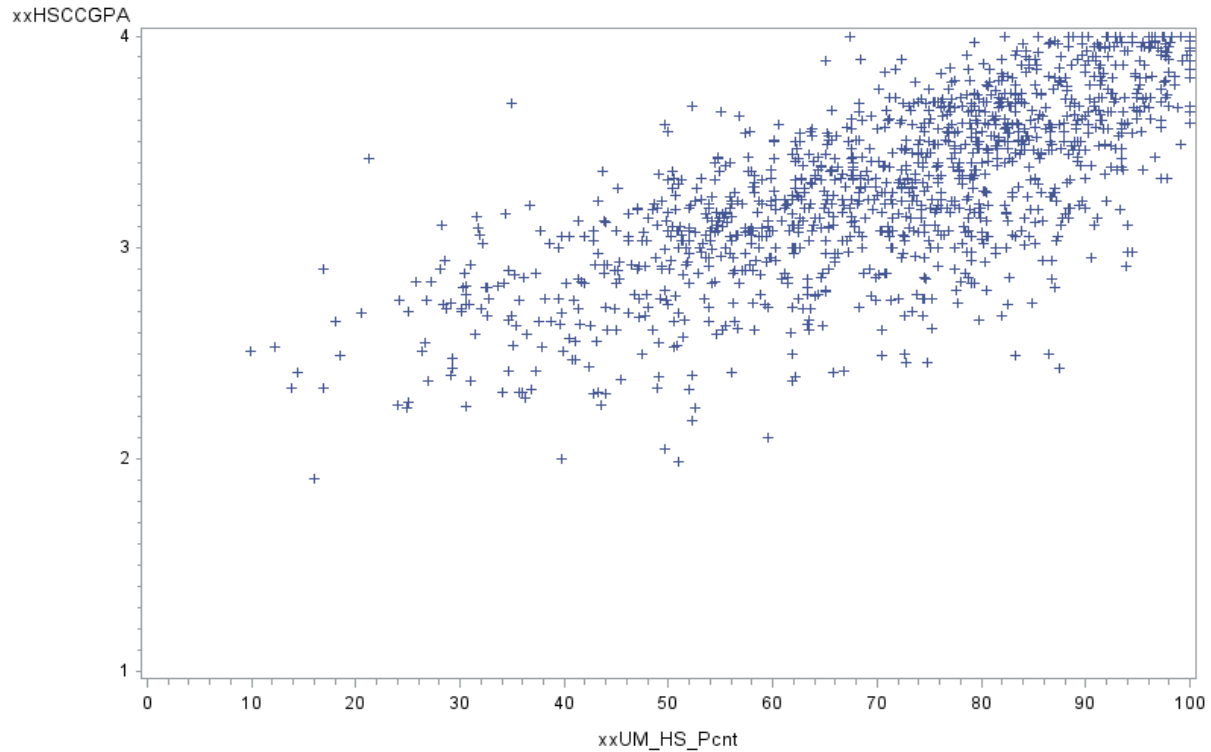# Legacy *Approach*: Dr. Joe Saupe c. 2003: Step #2

Fig 1. UM FT, DS, FTC U/G (and Recent, HS Core, ACT).
DESCR_TERM=FS2014
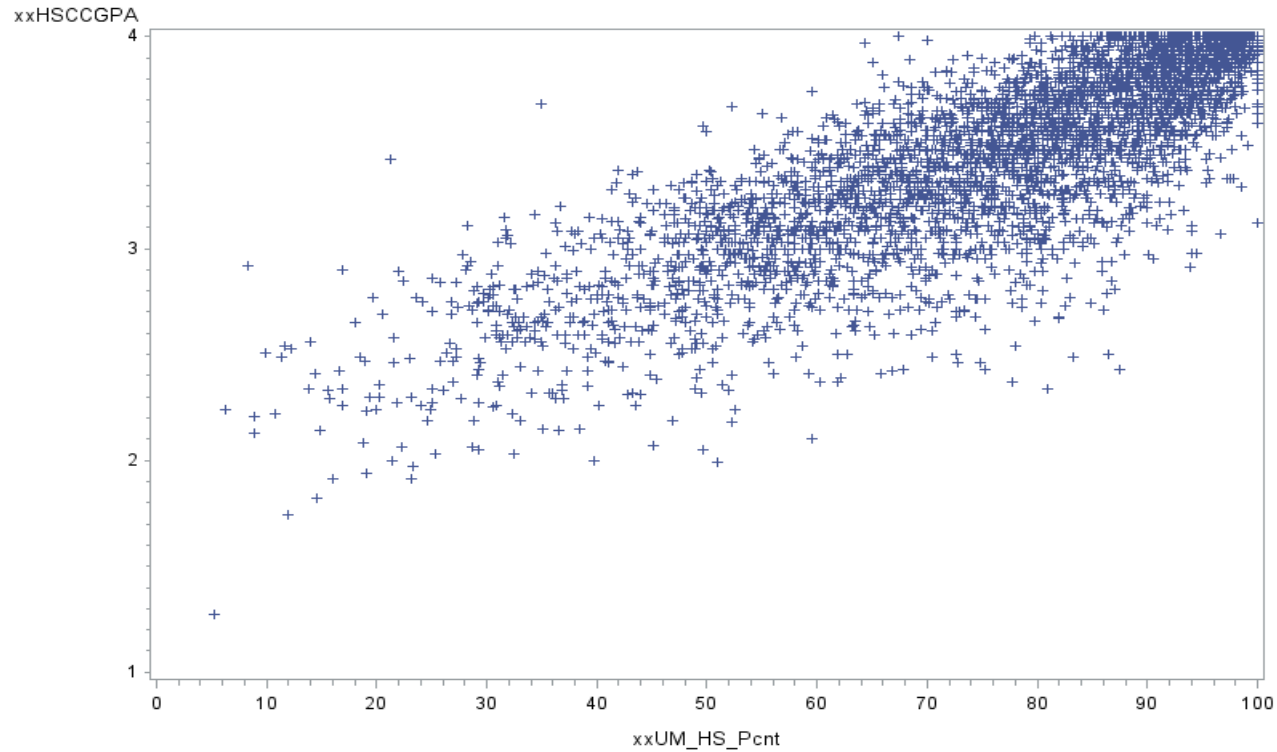
Legacy *Approach*: Dr. Joe Saupe c. 2003: Step #2

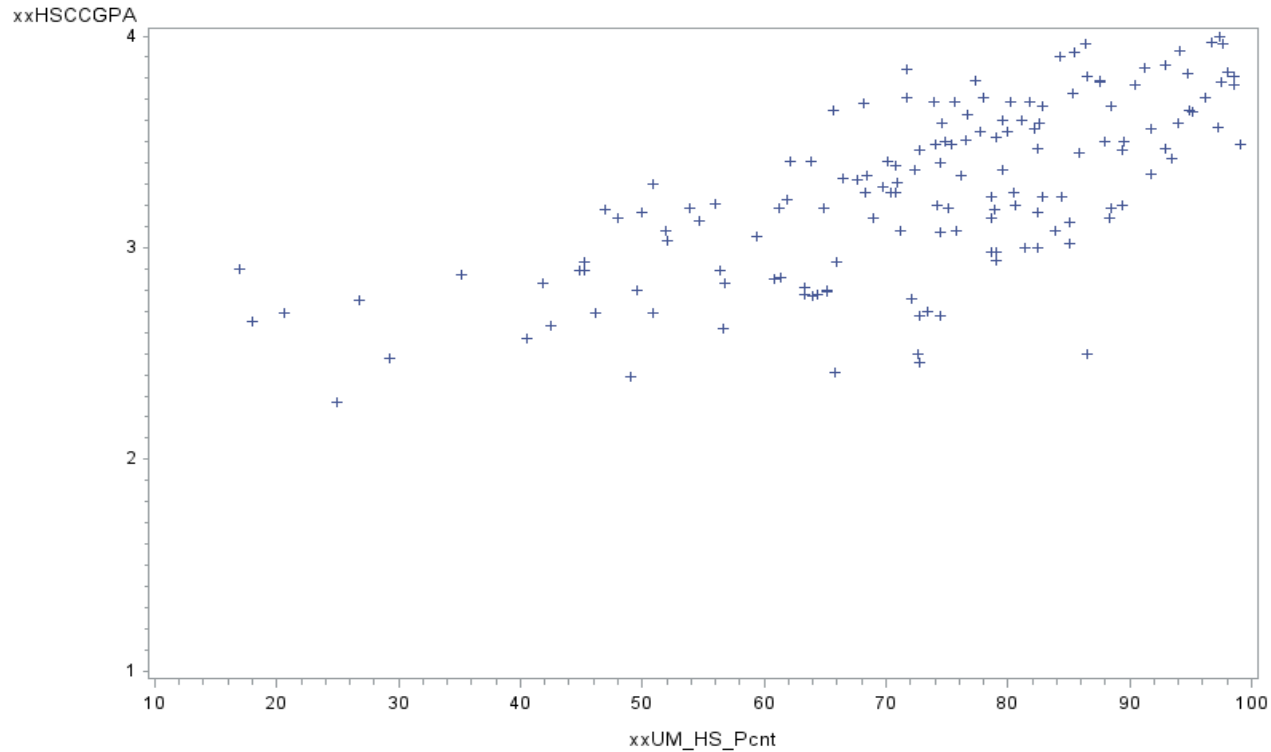**Fig 2. UM FT, DS, FTC U/G (and Recent, HS Core, ACT).**
*** Remove 'ACT >= 24'. ***
DESCR_TERM=FS2014

Legacy *Approach*: Dr. Joe Saupe c. 2003: Step #2

Fig 3. UM FT, DS, FTC U/G (and Recent, HS Core, ACT).
***** Keep only 'ACT = 20'. *****
DESCR_TERM=FS2014

Legacy *Solution*: Dr. Joe Saupe c. 2003: Step #3

"120 Rule" Restated (GP, c. 2003)			ACT - HS CC GPA Sliding Scale (rec. by RDT, Aug 27, 2009)	
ACT	Minimum HS %Rank		ACT	Min HS CC GPA
>= 24			>= 24	
23	48		23	2.80
22	54		22	2.90
21	62		21	3.05
20	69		20	3.20
19	78		19	3.35
18	86		18	3.50
17	94		17	3.60

UM Admission Policy for FTC, Full-time, Degree-seeking U/G.
==*** Full, official ***==

Automatic admission to UM if:

- (a) took ACT/SAT, (b) completed UM's HS core course requirements, and (c) graduated *recently* from an accredited high school, ***and either***

- Score >= 24 on ACT, ***or***
- Satisfy "120 Rule" (%ACT + HS Grad Class %Rank >= 120), ***or***

- Grad from a *ranking* MO high school & HS Grad Class %Rank >= 90, ***or***
- Grad from a *non-ranking* MO high school & HS Core Course GPA >= 3.5/4.0 .

UM FS2014 Cohort Success Results *(not* official)**.**

		N	%	Succeed	%	Retained	%	4-Yr Grad	%	4-Yr Prog	%
All UM											
3.	Recently graduated HS, took UM-required HS core courses, and took ACT/SAT.	7,182	100.0	6,475	90.2	6,250	87.0	3,238	45.1	5,275	73.4
a.	ACT >= 24.	5,322	74.1	4,869	91.5	4,697	88.3	2,476	46.5	4,041	75.9
b.	(ACT% + HS %Rank) >= 120.	916	12.8	819	89.4	773	84.4	407	44.4	633	69.1
c.	MO HS grad, and (Top 10% of HS grad class or HS Core GPA >= 3.5).	88	1.2	84	95.5	79	89.8	41	46.6	64	72.7
d.	Satisfiy ACT - HS %Rank sliding scale (c. 2003).	29	0.4	27	93.1	23	79.3	15	51.7	22	75.9
e.	*No* HS %Rank, and satisfy ACT - HS core course GPA sliding scale (Aug 2009).	327	4.6	300	91.7	296	90.5	173	52.9	247	75.5
x.	OTHERS	500	7.0	376	75.2	382	76.4	126	25.2	268	53.6

Alternative Approaches when HS %Rank is Missing (Research in Progress)

1. Regression (HSCCGPA = UM_HS_Pcnt, ACT). Then given ACT, estimate min HSCCGPA.

2. Logistic (SUCCEED = HSCCGPA, ACT). Then given ACT, and stated desired success probability, estimate min HSCCGPA.

3. Logistic (RETAINED = HSCCGPA, ACT). Then given ACT, and stated desired success probability, estimate min HSCCGPA.

4. Logistic (GRAD4 = HSCCGPA, ACT). Then given ACT, and stated desired success probability, estimate min HSCCGPA.

5. Logistic (PROG4 = HSCCGPA, ACT). Then given ACT, and stated desired success probability, estimate min HSCCGPA.

Summary & Conclusion

1. Saw pattern of increasing no. of entering U/G students w/o HS Grad Class %Rank, …

2. … but UM U/G admissions policy depends on HS %Rank!

3. Discussed UM's "legacy" solution (Dr. Joe Saupe).

4. Described on-going research into alternative approaches. These approaches are more technical, are motivated by student success, and promise to provide "better" solutions in that estimation/prediction errors can be generated.

QUESTIONS

END

University of Missouri System

COLUMBIA | KANSAS CITY | ROLLA | ST. LOUIS