

KIRIS VALIDATION STUDY

Cooperative Study with
UK Office of Planning &
Assessment

ACT

Rand

Spring 1995



Background & Purpose

- Kentucky Education Reform
 - Court Order for Equity
 - No local accountability
- High Stakes Testing-Grades 4, 8, 12
- Research Question:

Do we use KIRIS to replace ACT?



Collaborative Partners

- Kentucky Department of Education
- 4 Year State Universities in Kentucky
- ACT
- RAND Corporation



Components of KIRIS

- **Transitional Test**

- Multiple Choice & Open Ended

- **Portfolios**

- Best Works, Multi-Year

- **Performance Events**

- Group work followed by individual work to apply skills



Data Analysis Issues

- 1994
- Transitional Test Only – & Opened Ended
- Unable to Produce Portfolios
- Differing Questions
- UK Freshman Numbers
 - 2,673 Total
 - 1,516 KIRIS
 - 128 Unaccounted for



Performance Categories

- Novice
- Apprentice
- Proficient
- Distinguished



First-Time, First-Year Students

- 24.6 ACT Mean v. 20.1 Statewide
- 18% tops in Reading v. 6% Statewide
- 48% tops in Math v. 12% Statewide



Data Analysis

- Regression Analysis Questions:
 - What's the Power to Predict First Year Performance?
 - Can We use to Strengthen Current Admissions Model?
 - ACT scores and high school GPA
- Introductory GE Courses Used



KIRIS Score Distribution

KIRIS	Reading	Math	Science	Social Science
Novice	12%	11%	7%	17%
Apprentice	71	41	79	66
Proficient	16	30	13	16
Distinguished	2	18	1	2



Predicting Success in GE Courses?

- Reading & Writing101 $r = .10$
- Math/Algebra $r = .31$
- Science/Chemistry $r = .31$
- Social Science/Psych $r = .13$



Results for Reading & Writing

- KIRIS & Freshman 101 Writing Course:
 - $R = .10$
 - 40% of Novices earned A or B
 - 0% of Distinguished earned A or B



KIRIS & ALGEBRA GRADES

R=.31

KIRIS MATH	No.	% E	% D	% C	% B	% A
Novice	89	25	20	29	18	8
Apprentice	332	12	14	24	33	18
Proficient	127	6	6	18	34	36
Distinguished	27	0	0	19	22	59
All KIRIS	575	12	14	24	28	23
All 1 st Year	1,037	12	14	23	29	22

Regression Models for Algebra

Model	R Squared	Increment
ACT Math	.16	
ACT & HS GPA	.27	.11
ACT, GPA, KIRIS	.28	.01
Model 2		
Kiris Math	.12	
KIRIS & GPA	.22	.10
KIRIS, GPA, ACT	.28	.06



Limitations of Study

- KIRIS aimed at school as unit of analysis, not individuals
- Only 1 Year of data
- High stakes for Teachers, not the students
- Premature to assess impact on students



Recommendations

- Premature for University to adopt KIRIS in admissions decisions
- Recommend changing testing from senior year to junior year to improve student motivation to perform
- Continue to explore possibility as KIRIS matures





Questions & Discussion
Thank You!