Florida Atlantic University: College of Education

FL DOE Value-Added Model

An executive summary report

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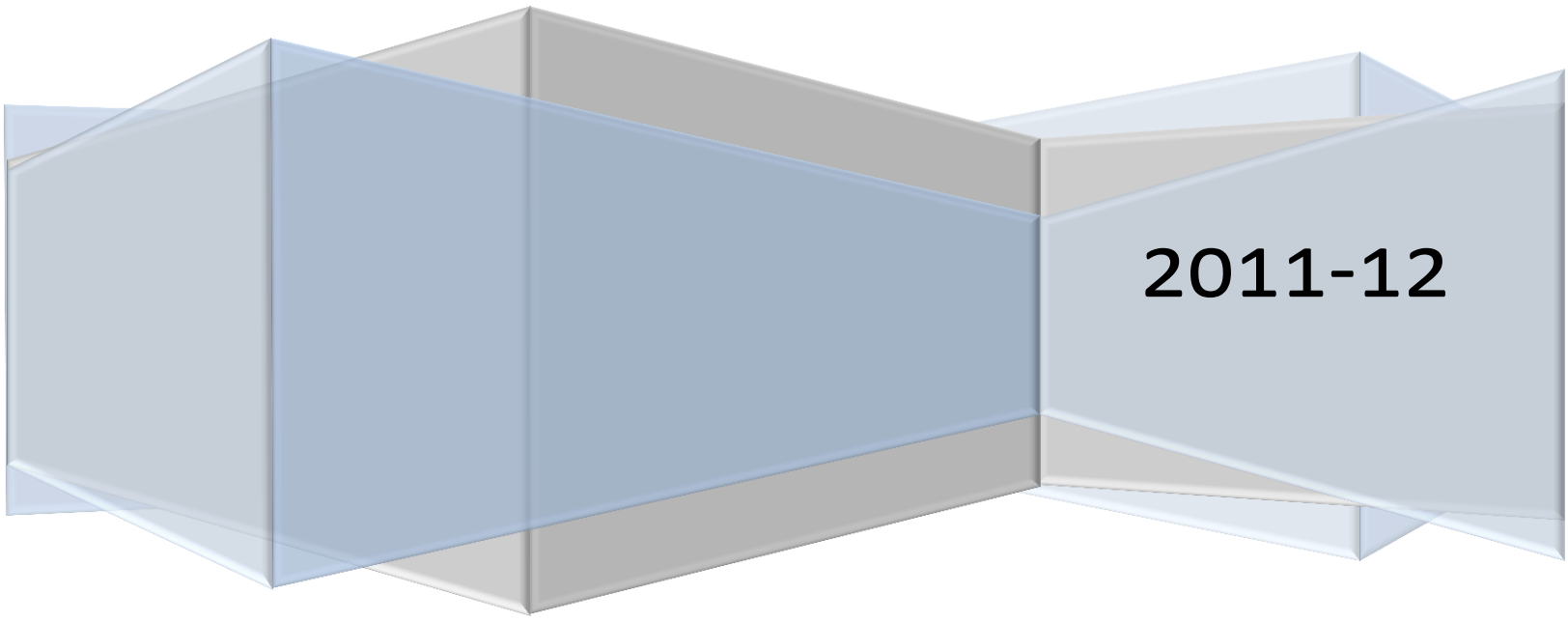

Introduction

On March 22, 2012 the "Florida's Value-added Data Technical Assistance Workshop" was held by the Florida Department of Education (DOE) regarding the first compilation of the work of the Teacher Leader Preparation Implementation Committee (TLPIC). The committee responded to Race to the Top (RTTT) directives including:

> Florida will set expectations for new outcome-based approval requirements using the new student growth model.

The directive requires the linkage of student achievement data to preparation programs and the public reporting of these data. To this end, the DOE provided individual institutions with historical data files on FAU program completer's impact on P-12 student learning. This data is based upon statewide student achievement data sets from the DOE, and was filtered using a Value-added model (VAM) , developed by the TLPIC.[1]

Current Process

Rule 6A-5.066 requires that institutions describe their continuous improvement including analysis of specific data. The Rule states that an institution's description of its continuous improvement of a state-approved program must include "program completers' impact on student learning." Initial and Continued Approval Guidelines for Initial Teacher Preparation programs include Standard 3.4:

> Completers demonstrate impact on P-12 student learning based on student achievement data during the first year of teaching following program completion.

The DOE Standard 3 is currently about approved programs implementing processes to ensure continuous program improvement. The current process does not incorporate actual program performance. The DOE shared the intention to move from process to performance targets, including using the VAM data. The timeline for this transition begins in the fall of 2012, and will conclude in the summer of 2013.

Intended Use

The DOE informed institutions that the VAM data files should be used to inform programmatic decision-making toward continuous improvement, and will be incorporated into the November 2012 eIPEP reporting. The DOE also shared that the use of completer impact data, using the VAM may be among program data that will be shared publicly beginning in 2012-13. The use of these data are under consideration for use in determining future program approval status.

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[1] The TLPIC Committee is comprised of 24 members, including teachers and school leaders from postsecondary institutions and school districts, district administrators, superintendents, and school board members. Membership represents Florida's diversity in culture, community, and region. Members serve at the appointment of the Commissioner for 4 years.

Purpose

The *Student Success Act* and *Race to the Top* set forth the following in section 1012.34, F.S.:

> Evaluation Systems must be designed to increase student learning growth by improving instructional practice and school leadership

The Performance of Students is addressed in s. 1008.22(8), F.S:

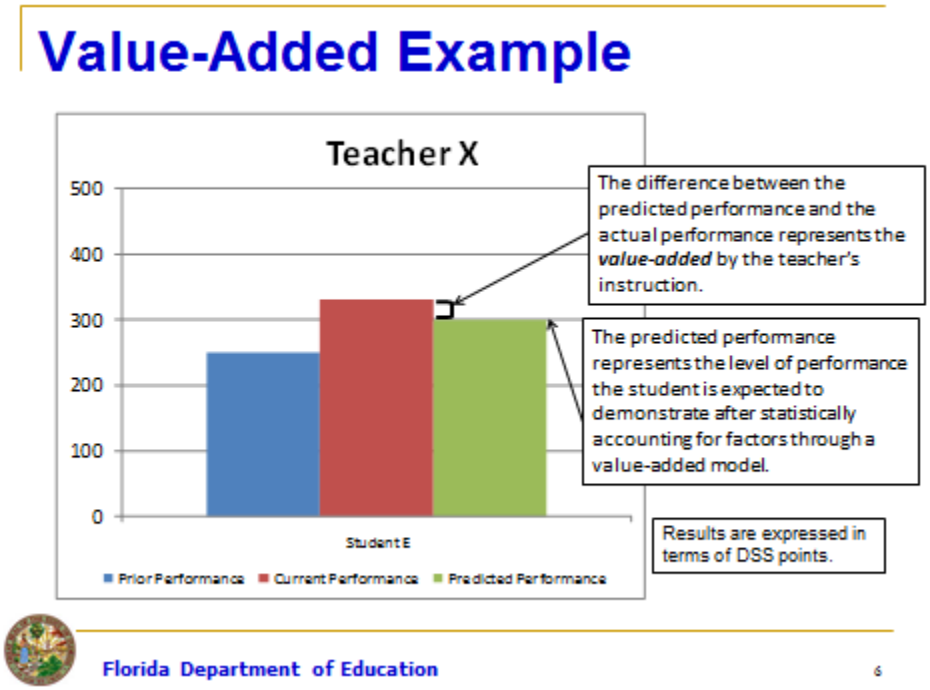
> At least 50% of a performance evaluation must be based upon data and indicators of student learning growth assessed annually and measured by statewide assessments or, for subjects and grade levels not measured by statewide assessments, by district assessments.

The VAM

Florida's VAM was developed by a team of Florida educators, including a committee of stakeholders, the Student Growth Implementation Committee (SGIC) to identify the type of model and the factors that should be accounted for in Florida's value-added models. To provide technical expertise, the Department contracted with the American Institutes for Research (AIR) to help the SGIC develop the recommended model that was adopted. The SGIC's recommended FCAT model was fully adopted by the Commissioner with no additions, deletions, or changes http://www.fldoe.org/committees/sg.asp

A value-added model measures the impact of a teacher on student learning, by accounting for other factors that may impact the learning process. These models do not evaluate teachers based on a single year of student performance or proficiency (status model) or evaluate teachers based on simple comparison of growth from one year to the next (simple growth). An example of the VAM is provided as Table 1, below.

Table 1: Value Added Example



Source: DOE VAM Presentation 3/22/12

The advantages of a VAM include the acknowledgment that a) teachers teach classes of students who enter with different levels of proficiency and possibly different student characteristics, b) value-added models "level the playing field" by accounting for differences in the proficiency and characteristics of students assigned to teachers, and c) value-added models are designed to mitigate the influence of differences among the entering classes so that schools and teachers do not have advantages or disadvantages simply as a result of the students who attend a school or are assigned to a class.

VAM Factors

The SGIC identified factors to "level the playing field" in the analysis of data. Student characteristics identified include:

- Up to two prior years of achievement scores (the strongest predictor of student growth)
- The number of subject-relevant courses in which the student is enrolled
- Students with Disabilities (SWD) status
- English Language Learner (ELL) status
- Gifted status
- Attendance
- Mobility (number of transitions)
- Difference from modal age in grade (as an indicator of retention)

Classroom characteristics include:

- Class size
- Homogeneity of students' entering test scores in the class

The VAM Score

The VAM score represents an estimate of a teacher's impact on student learning, after accounting for other factors that may impact learning. A score of "0" indicates that students performed no better or worse than expected based on the factors in the model; a positive score indicates that students performed better than expected, and a negative score indicates that students performed worse than expected. Individual teacher scores are expressed in terms of Developmental Scale Score (DSS) points. To account for differences in the FCAT vertical scale across grade levels, subject areas, and years, a teacher's value-added scores are aggregated into one score, and then transformed into a proportion of an "average year's growth". This proportion of an average year's growth provides more context and helps describe the magnitude of the gain.

In addition to the value-added score, the model also yields information on the number and percent of students that met their statistical performance expectations. Though these data do not provide information on how far students improved or declined, it does provide information on the quantity of students who met their expectations. These data are used in analyzing the disaggregated performance of student subgroups.

Additional Analysis

The TLPIC identified additional data requests in reference to the student performance of program completers. The results included:

- A focus on completers teaching in fields they were trained in
- An investigation of additional thresholds for programs comparison (i.e., various other state averages)
- Performance data of student subgroups taught by program completers

The analysis was presented only for "in-field" completers of Initial Certification programs. There are specific challenges associated with using only this subset of program completers, including the reduction of the number of completers on which to base the program evaluation. Table 2 demonstrates a decline from almost 20% of program completers with VAM data available to 10% or less when the "in field" filter is applied.

Table 2: Focus on "in field" Completers

ITP		2007-08	2008-09	2009-10
Completers		7,025	7,328	6,493
Completers with VAM Data in Reading and/or Math	#	1,337	1,348	1,299
	%	19.0	18.4	20.0
"In-Field" Completers with VAM Data in Reading	#	707	661	705
	%	10.1	9.0	10.9
"In-Field" Completers with VAM Data in Math	#	554	494	530
	%	7.9	6.7	8.2

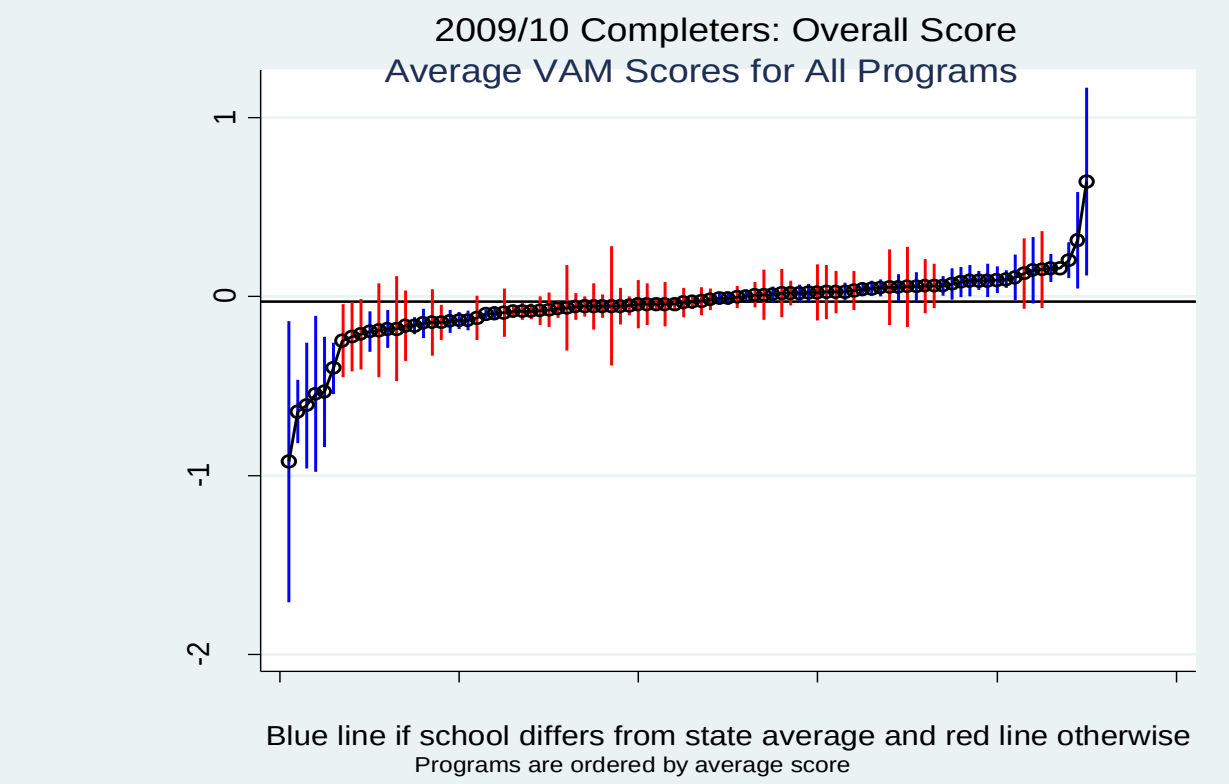
ITP		2007-08	2008-09	2009-10
Reading Program Completers		3,835	3,870	3,568
Reading Program Completers with VAM Data in Reading	#	707	661	705
	%	18.4	17.1	19.8
Math Program Completers		3,456	3,444	3,227
Math Program Completers with VAM Data in Math	#	554	494	530
	%	16.0	14.3	16.4

Source: DOE VAM Presentation 3/22/12

VAM data

AIR provided TLPIC with data comparing average VAM performance for institutions/districts to the overall statewide average for all completers in the state. AIR applied different thresholds of statistical confidence to demonstrate one method of program performance classification in terms of performance ***against the statewide average of all completers.*** Table 3 demonstrates the various state averages.

Table 3: Average VAM Scores, 2009-2010



Source: DOE VAM Presentation 3/22/12
Note: Each vertical line represents a program, hollow circles represent the average performance of a program. The length of the vertical line represents the confidence interval around the program average (i.e., standard error applied). The horizontal line represents the threshold by which the programs are compared; in this case, the threshold is the statewide average of all completers.

Subsequently, the committee requested to investigate different thresholds. Six different thresholds were identified:

- Performance of all teachers with 0-1 year of experience
- Performance of all teachers with 0-1 year of experience and advanced degrees
- Performance of all teachers with less than 5 years of experience
- Performance of all teachers with less than 5 years of experience and advanced degrees
- Performance of all teachers with greater than 5 years of experience

- Performance of all teachers with greater than 5 years of experience and advanced degrees

Table 4 demonstrates slight differences in various statewide averages of overall (reading and math combined) VAM scores.

Table 4: Statewide Overall VAM Scores

State Averages – VAM data expressed as a proportion of an average year's growth	Across 3 years (2007-08 to 2009-10)
All Completers	-0.024
Teachers with 0-1 year of experience	-0.024
Teachers with 0-1 year of experience and advanced degrees	0.016
Teachers with less than 5 years of experience	-0.012
Teachers with less than 5 years of experience and advanced degrees	0.008
Teachers with 5 or more years of experience	0.018
Teachers with 5 or more years of experience and advanced degrees	0.026

Source: DOE VAM Presentation 3/22/12

K-12 Student performance data , using the VAM, can be disaggregated by student subgroups using the data on percent of students meeting or exceeding their expectation (predicted performance). Data compare the performance of student subgroups taught by program completers by institution/district. The DOE presented the small "n" sizes are less of a concern with this analysis since it is based on the overall number of students taught by program completers, not the number of program completers. The percent meeting expectations does not equate to a value added score. Table 5 demonstrates student subgroup performance across all program completers during three years of performance data (2007-08 to 2009-10.) Table 6 presents student subgroup performance across the same time in the areas of reading, using Initial Teacher Preparation, Educator Preparation Institutes, and District Alternative Certification programs as comparison.

Table 5: K-12 Student Subgroup Performance

Student Subgroup	Reading	Math
White	50.0	48.9
African American	44.7	46.4
Hispanic	50.6	49.2
Asian	53.7	55.1
Native American	46.7	51.8
Multiracial	49.7	48.4
Free/Reduced Lunch	47.3	48.0
Students with Disabilities	47.8	48.0
English Language Learners	48.1	49.9

Table 6: K-12 Student Subgroup Performance, Reading

Student Subgroup	ITP	EPI	DACP
White	49.3	50.4	51.0
African American	44.6	44.3	45.1
Hispanic	50.9	49.6	50.4
Asian	52.9	52.3	55.8
Native American	41.7	48.8	53.8
Multiracial	49.6	49.7	50.0
Free/Reduced Lunch	47.3	46.9	47.5
Students with Disabilities	48.0	51.2	45.5
English Language Learners	48.7	48.3	46.0

Source: DOE VAM Presentation 3/22/12
Note: Additional tables are available representing subgroup data in reading and math, comparing the three DOE approved certification routes.

Part 1

Institutional Data- ITP

Florida Atlantic University was provided a CD for analysis of individual program completer VAM data. The data includes 2007-08, 2008-09 and 2009-10 FAU program completer's VAM scores. The percentage of completers with VAM scores is very low. For the selected years, the highest percentage included is that 17% of all 2009-10 FAU program completers have available VAM scores. Overall, Table 7 demonstrates that FAU program completers have VAM scores slightly below "0". A score of 0 indicates that students performed no better or worse than expected based on the factors in the model.

Table 7: FAU Program Completer VAM Scores

Completion Year	Subject	Completers	Completers in Analysis	Completers with VAM Scores	Average Completer VAM Score
		n	n	%	
2007-08	All	632	102	16.10	0.049
	Math	632	83	13.10	-0.016
	MathProg	408	53	13.00	-0.014
	Reading	632	83	13.10	0.065
	ReadProg	448	66	14.70	0.051
2008-09	All	604	87	14.40	0
	Math	604	55	9.10	0.009
	MathProg	398	34	8.50	-0.044
	Reading	604	65	10.80	-0.023
	ReadProg	432	45	10.40	-0.039
2009-10	All	664	114	17.20	-0.13
	Math	664	68	10.20	-0.052
	MathProg	413	45	10.90	-0.069
	Reading	664	103	15.50	-0.134
	ReadProg	478	74	15.50	-0.15
All	All	1900	303	15.90	-0.032
	Math	1900	206	10.80	-0.021
	MathProg	1219	132	10.80	-0.04
	Reading	1900	251	13.20	-0.039
	ReadProg	1358	185	13.60	-0.051

Source: DOE VAM data files 2012

The trend of all subject areas by year indicates a slight decline. Table 8 presents this data.

Table 8: FAU Program Completer VAM Scores , Trend of All Subject Areas

Completion Year	Subject	Completers	Completers in Analysis	Completers with VAM Scores	Average Completer VAM Score
		n	n	%	
2007-08	All	632	102	16.10	0.049
2008-09	All	604	87	14.40	0
2009-10	All	664	114	17.20	-0.13
State of FL	All	30730	6806	22.1	-0.030

Source: DOE VAM data files 2012

Data presented by program area was presented in the data files received from the DOE. Math and Reading test scores were used to evaluate the VAM for FAU program completers and is presented in Table 9. Again, very low percentages of many program completers were evident in the DOE data, with some programs showing no available completers in the analysis. Three program areas, Guidance and Counseling, English 6-12 and Exceptional Student Education show VAM scores above "0" (a positive score indicates that students performed better than expected).

Table 9: FAU Program Completer VAM Scores, by Program Area Completed

Program Name	Completers	Completers in Analysis	Completers with VAM Scores	Average Completer VAM Score
	n	n	%	
Reading K-12	117	32	27.4	-0.108
Educational Leadership	246	50	20.3	-0.051
Mathematics 6-12	13	8	61.5	-0.023
Biology 6-12	21	2	9.5	-0.183
Social Science 6-12	68	4	5.9	-0.285
Guidance and Counseling PK-12	62	5	8.1	0.496
English 6-12/ESOL Endorsement	35	16	45.7	0.109
Exceptional Student Education K-12/ESOL E	111	25	22.5	0.078
Elementary Education K-6/ESOL Endorsement	1206	161	13.3	-0.052

Source: DOE VAM data files 2012

Florida Atlantic University program completer's VAM scores were slightly worse than the State of Florida Average over the same three year data collection period. Table 10 presents the overall summary of FAU VAM data compared to data from the State of Florida.

Table 10: VAM Data , 2007-2010

Completion Year	Subject	Completers	Completers in Analysis	Completers with VAM Scores	Average Completer VAM Score
		n	n	%	
FAU	All	1900	303	15.9	-0.032
State of FL	All	30730	6806	22.1	-0.030

Source: DOE VAM data files 2012

In summary, low percentages of completers with VAM scores may hinder intended use of VAM data for program review and continuous improvement. Florida Atlantic University hopes to review more complete data sets before a thorough analysis would be applied to program changes.

Part 2

Institutional Data: School-Based Administrators

In late July 2012, Florida Atlantic University was provided a CD for analysis of individual EDLK program completer VAM data. The data includes 2006-2007, 2007-08, 2008-09 and 2009-10 FAU Educational Leadership School Leader program completer's VAM scores. The percentage of completers with VAM scores is very low. For the selected years, data is provided only when an EDLK program completer is hired in an administrative role at a public school setting in the state of Florida. Job titles in the report include: Interim AP, Dean/Assistant Principal, Director-Vocational Education, Assistant Principal, and Principal. VAM scores were calculated for each administrator, by program of graduation in the Educational Leadership field. The data are thus assigned to any and all administrators at any given school site, and may not be used to inform individual performance of school leader completers.

Overall, Table 11 demonstrates that FAU School Leaders program completers have VAM scores slightly above "0". A score of 0 indicates that students performed no better or worse than expected based on the factors in the model.

Table 11: VAM - School based Administrators

Completion Year	Completers	Completers in Analysis	Completers with VAM Scores	Average Completer Reading VAM Score	Average Completer Math VAM Score
	n	n	%		
2006-07	63	26	41.3	0.27	0.11
2007-08	77	11	14.3	-0.04	0.004
2008-09	95	10	10.5	0.08	0.042
2009-10	92	6	6.5	0.12	-0.15

Data regarding state VAM data was not available for comparison.