Superintendent's Updates

Randolph County Schools' purpose is to prepare today's learners for tomorrow's demands.

February 4, 2025

Organizational Development: Inputs and Outputs

Outputs can only change if we are willing to adjust the inputs—without modifying resources, strategies, or processes, we cannot expect different results.

Organizational Development: Inputs and Outputs

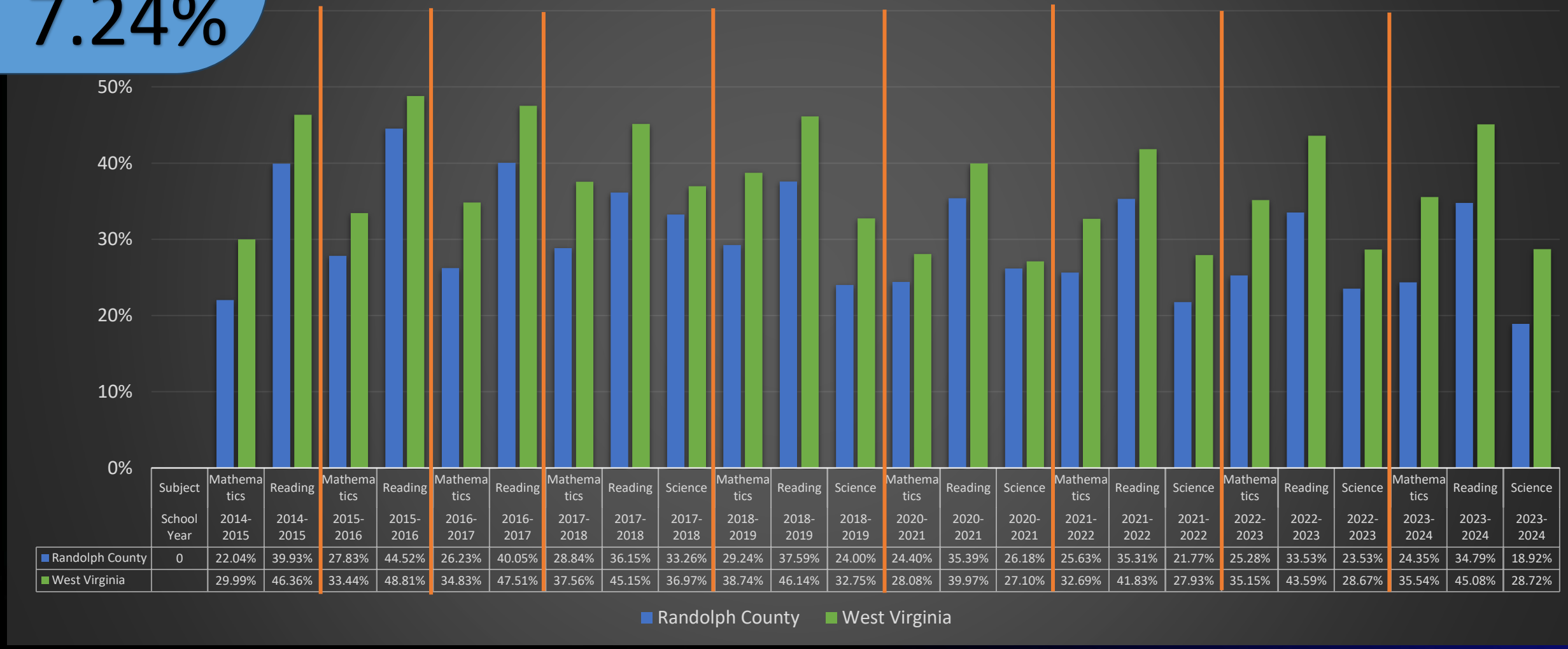
This principle of inputs and outputs is well-documented in **systems theory, organizational change models, and performance improvement frameworks**. Here are some relevant references:

1. **Kurt Lewin (1947) – Change Theory (Unfreeze-Change-Refreeze)**
   - Lewin's model suggests that **to achieve different outcomes (outputs), organizations must alter their inputs** by disrupting the status quo, implementing change, and reinforcing it.
2. **Ludwig von Bertalanffy (1968) – General Systems Theory**
   - Bertalanffy's open systems theory states that an organization is **a dynamic system where outputs are a function of inputs** processed through various internal mechanisms**. If you want different outputs, you must change the inputs** and how they are processed.
3. **Nadler & Tushman (1980) – Congruence Model**
   - This model emphasizes that an organization's effectiveness depends on how well its **inputs (strategy, people, structure, and culture) align** to produce desired outputs. Change in outputs requires **realigning inputs**.
4. **W. Edwards Deming (1986) – Total Quality Management (TQM)**
   - Deming argued that **quality improvement requires input changes**—adjusting processes, training, and resources directly impacts performance outcomes.
5. **Peter Senge (1990) – The Fifth Discipline**
   - Senge emphasized **systems thinking**, where **outputs are shaped by underlying inputs and structures**. Without changing the system (inputs), different results are unlikely.

Org. Dev.: Inputs and Outputs

Average
7.24%

Proficiency Rate Trend by Subject: RCS vs. WV



Subject	Mathematics	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	Reading	Science	Mathematics	Reading	Science	Mathematics	Reading	Science	Mathematics	Reading	Science	Mathematics	Reading	Science	Mathematics	Reading	Science
School Year	2014-2015	2014-2015	2015-2016	2015-2016	2016-2017	2016-2017	2017-2018	2017-2018	2017-2018	2018-2019	2018-2019	2018-2019	2020-2021	2020-2021	2020-2021	2021-2022	2021-2022	2021-2022	2022-2023	2022-2023	2022-2023	2023-2024	2023-2024	2023-2024
Randolph County	0	22.04%	39.93%	27.83%	44.52%	26.23%	40.05%	28.84%	36.15%	33.26%	29.24%	37.59%	24.00%	24.40%	35.39%	26.18%	25.63%	35.31%	21.77%	25.28%	33.53%	23.53%	24.35%	34.79%	18.92%
West Virginia		29.99%	46.36%	33.44%	48.81%	34.83%	47.51%	37.56%	45.15%	36.97%	38.74%	46.14%	32.75%	28.08%	39.97%	27.10%	32.69%	41.83%	27.93%	35.15%	43.59%	28.67%	35.54%	45.08%	28.72%

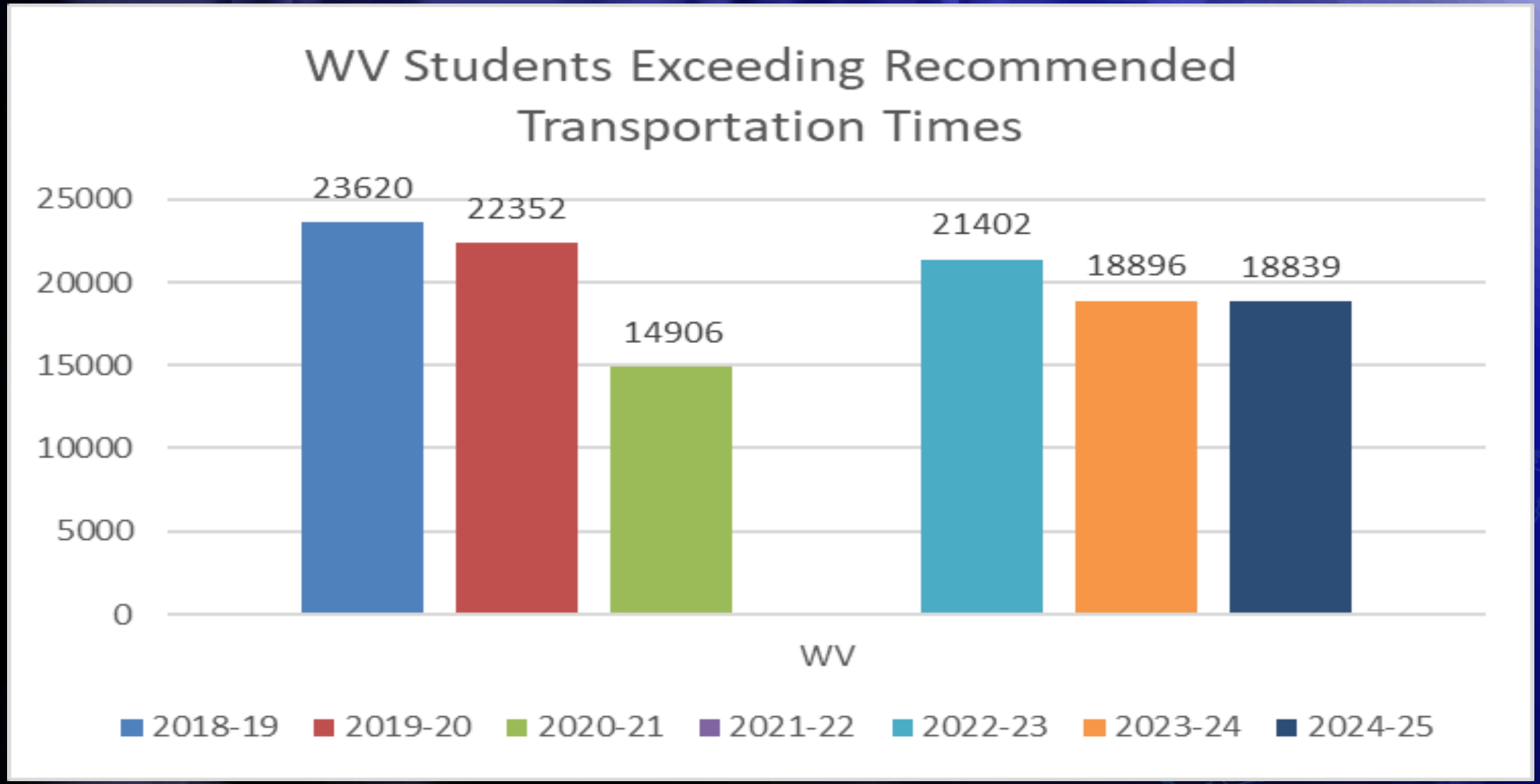
Organizational Development: Inputs and Outputs

Organizational outcomes are a direct result of the inputs we provide—whether it's strategy, structure, or resources. Research from Lewin, Bertalanffy, Nadler & Tushman, and others emphasizes that **meaningful change in outputs requires a deliberate adjustment of inputs and processes.**

To drive effective change, organizations must rely on research and data-driven decisions, ensuring that adjustments are based on evidence rather than assumptions, feelings, or perceptions.

Transportation Statistics

WVDE Transportation Statistics



Transportation Statistics

National Highway Traffic Safety Administration

"Each school day, millions of children ride school buses. Did you know that the school bus is one of the safest vehicles on the road? ***Less than 1% of all traffic fatalities involve children on school transportation vehicles.*** *However, children are more at risk when approaching or leaving a school bus. It's important for all drivers, as well as parents and students, to understand school bus safety."*

https://www.nhtsa.gov/road-safety/school-bus-safety

National Safety Council

US Transportation Statistics

Deaths in school bus-related crashes, 2013-2022

Person type	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	130	120	115	125	96	117	111	54	108	104
Occupant of other vehicle	92	77	87	85	71	80	81	42	75	76
Pedestrian	22	28	11	20	10	23	15	6	21	13
School bus passenger	6	7	5	9	4	9	4	1	4	8
School bus driver	5	4	8	5	8	3	5	1	6	4
Bicyclist	3	4	4	4	2	2	6	2	2	2
Other non-occupants	2	0	0	2	1	0	0	2	0	1

https://injuryfacts.nsc.org/motor-vehicle/road-users/school-bus/

WV Transportation Statistics

West Virginia Department of Education

The most recent fatality related to school buses in WV occurred in 2008.

A 6-year-old student was struck by a driver who ran signal lights of the bus and was not a result of driver error or adverse weather conditions.

Transportation Research

Bus Rides and Academic Outcomes

DO LONG BUS RIDES DRIVE DOWN ACADEMIC OUTCOMES? (2022)

"Yet, little is known about the commute for bus riders, including the average length of the bus ride or whether long commutes harm academic outcomes."

Used data from New York City to explore the morning commutes of more than 120,000 bus riders.

*"We find that there is **no effect of commute length on test scores overall**, but negative effects of long commutes on attendance and chronic absenteeism."*

Cordes, S. A., Rick, C., & Schwartz, A. E. (2022). Do Long Bus Rides Drive Down Academic Outcomes? *Educational Evaluation and Policy Analysis*, *44*(4), 689-716. https://doi.org/10.3102/01623737221092450

Bus Rides and Academic Outcomes

ANOTHER ONE RIDES THE BUS: THE IMPACT OF SCHOOL TRANSPORTATION ON STUDENT OUTCOMES IN MICHIGAN (2024)

Provided some of the first causal evidence of transportation impacts on student attendance and achievement using a rich panel of student-level enrollment and address data for Michigan public school students. Collected data from the 50 largest districts in Michigan.

"The most direct way that school transportation can change achievement is by increasing attendance…These results are compelling evidence that school-provided transportation increases attendance for students most at risk to miss school. However, ***I find no effect of school transportation on student achievement outcomes****."*

Danielle Sanderson Edwards; Another One Rides the Bus: The Impact of School Transportation on Student Outcomes in Michigan. *Education Finance and Policy* 2024; 19 (1): 1–31. doi: https://doi.org/10.1162/edfp_a_00382

Bus Rides and Academic Outcomes

EXAMINING THE IMPACTS OF SCHOOL BUS TRAVEL ON STUDENTS' ACADEMIC PERFORMANCE IN TWO MAJOR CITIES (2024)

The research is limited. “In this study, we used data from two major Canadian cities, Toronto and Ottawa, to investigate the relationship between the proportion of students commuting by bus to and from school and the percentage meeting standards on standardized tests…**Despite earlier research on the effects of school bus transportation on students’ academic achievement, it is limited, lacking internal and external validity, and outdated.**”

In the Toronto analysis, there were 482 schools with a Grade 3, 424 with a Grade 6, and 88 with Grades 9 and 10.

In the Ottawa analysis, there were 166 schools with a Grade 3, 160 with a Grade 6, and 28 with Grades 9 and 10.

Bus Rides and Academic Outcomes

EXAMINING THE IMPACTS OF SCHOOL BUS TRAVEL ON STUDENTS' ACADEMIC PERFORMANCE IN TWO MAJOR CITIES (2024)

*"Among the models examined, over 72% had a negative coefficient. Significant results were observed only for **Grade 10 literacy** in Toronto and Ottawa, both showing a negative coefficient, and for **Grade 3 writing** in Toronto, which had a positive coefficient. This suggests that school bus travel is inversely correlated with students' academic achievement for Grade 10 literacy in Toronto and Ottawa and positively correlated for Grade 3 writing in Toronto."*

Lutz, K. L., S. B. Rakowska, and M. D. Adams. (2024). Examining the impacts of school bus travel on students' academic performance in two major cities. *Canadian Geographies / Géographies canadiennes*, 68, 603–614. https://doi.org/10.1111/cag.12957

Reminder

The board meetings on 2/18 need to begin at 5:00 pm for the calendar hearings. Regular meeting to begin at 5:30 pm.

Congratulations

Jon Clingerman has been selected as the 2024-25 WVACTE Teacher of Year and will be representing WV in Region I Conference in Massachusetts in March.

Questions?

Organizational Development References

- **Kurt Lewin – Change Theory**

  Lewin, K. (1947). *Frontiers in group dynamics: Concept, method, and reality in social science; social equilibria and social change.* Human Relations, 1(1), 5-41.

- **Ludwig von Bertalanffy – General Systems Theory**

  Bertalanffy, L. (1968). *General system theory: Foundations, development, applications.* George Braziller.

- **Nadler & Tushman – Congruence Model**

  Nadler, D. A., & Tushman, M. L. (1980). *A model for diagnosing organizational behavior.* Organizational Dynamics, 9(2), 35-51.

- **W. Edwards Deming – Total Quality Management (TQM)**

  - Deming, W. E. (1986). *Out of the crisis.* MIT Press.

- **Peter Senge – Systems Thinking & Organizational Learning**

  Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization.* Doubleday.