

MUS Workforce Data Reporting Performance Audit

Audit Conducted by the
Montana Legislative Audit Division

Presented to the Montana Legislature,
Legislative Audit Committee on
February 2, 2016

Audit Objectives

- ❖ Determine whether MUS workforce data are accurately reported at the federal level and how these data compare to similar institutions throughout the country.
- ❖ Determine whether the reporting of workforce data is consistent across the MUS and whether OCHE effectively maintains, monitors and uses management information to oversee staffing patterns and trends.
- ❖ Evaluate the accuracy and consistency of procedures used for collecting and reporting workforce data at the individual MUS units.

Report Organization

- 1) MSU and UM ***Peer Analysis*** – Administrative Cost Indicators
- 2) Data Access & Availability – Workforce ***Categorization Model***
- 3) Data Accuracy & Consistency – ***Banner and IPEDS data***

Full Audit Report: [MUS Workforce Data Reporting](#)

Peer Analysis

- ❖ Compared MSU and UM to peer institutions using IPEDS Data
(IPEDS = US Dept. of Education's Integrated Postsecondary Education Data System)
- ❖ Used metrics to compare workforce-related trends and costs in higher education
 - 1) Total Employee FTE
 - 2) Student to Staff Ratio
 - 3) Instructional FTE Ratio
 - 4) Instructional Support per Student FTE
 - 5) Administrative Costs per Student FTE
 - 6) Occupational Category Comparison

MSU & UM Peer Institutions

Legislative Audit Divisions
Factor Analysis and
Individual Units'
Selections

MSU-Bozeman (LAD Factor Analysis)	MSU-Bozeman (MSU Peer Selection)
University of Idaho	University of Idaho
University of Wyoming	University of Wyoming
Auburn University	Colorado State University-Fort Collins
Bowling Green State University-Main Campus	New Mexico State University-Main Campus
Clemson University	North Dakota State University-Main Campus
Mississippi State University	Oregon State University
University of Maine	University of Alaska-Fairbanks
University of Nebraska-Lincoln	South Dakota State University
University of Nevada-Reno	Washington State University
University of Rhode Island	Utah State University
UM-Missoula (LAD Factor Analysis)	UM-Missoula (UM Peer Selection)
New Mexico State University-Main Campus	New Mexico State University-Main Campus
University of Idaho	University of Idaho
Louisiana Tech University	Montana State University
Missouri University of Science and Technology	Northern Arizona University
Oregon State University	University of Alaska-Fairbanks
University of Louisiana at Lafayette	University of North Dakota
University of Maine	University of South Dakota
University of Missouri-Kansas City	University of Wyoming
University of Nebraska-Lincoln	Utah State University
University of Nevada-Reno	Western Washington University

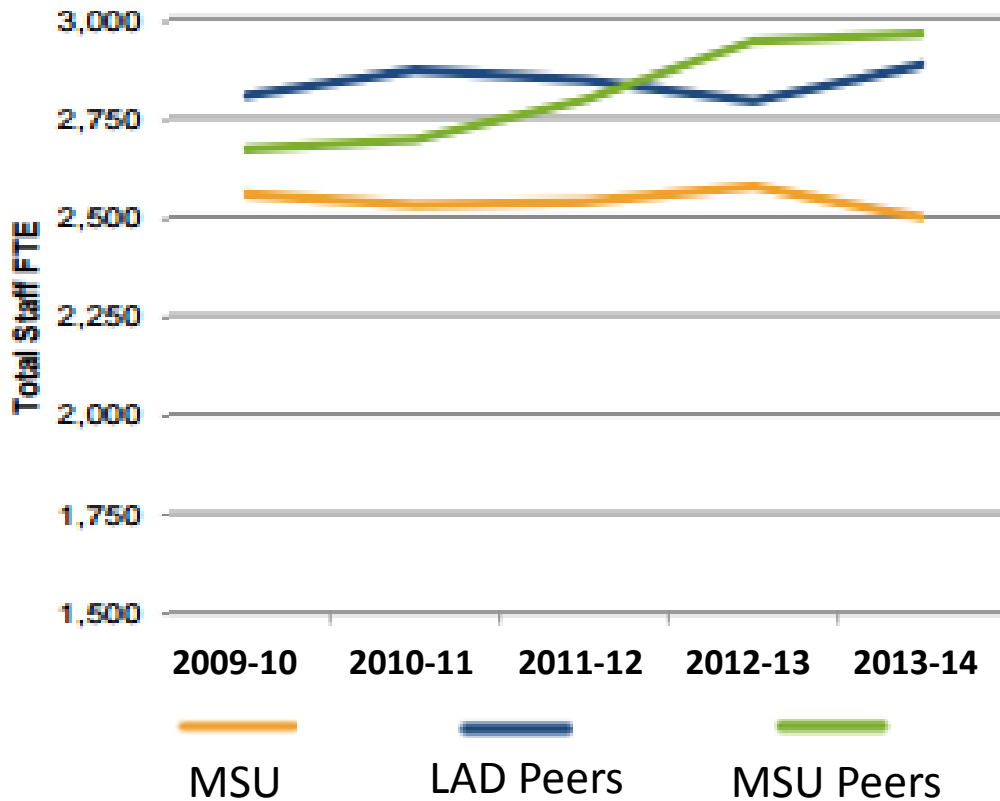
Source: Compiled by
Legislative Audit Division
using IPEDS data and
information obtained
from MSU and UM staff

Peer Analysis

METRIC #1 - Total Employee FTE

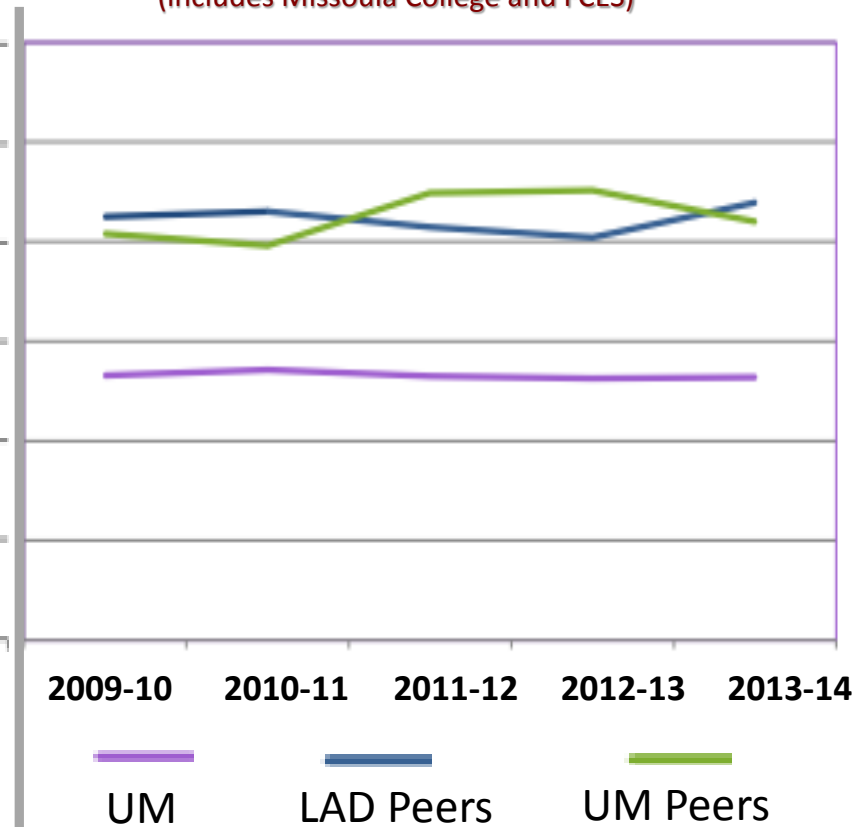
Montana State University

(includes Gallatin College, AES, ES, FSTS)



University of Montana

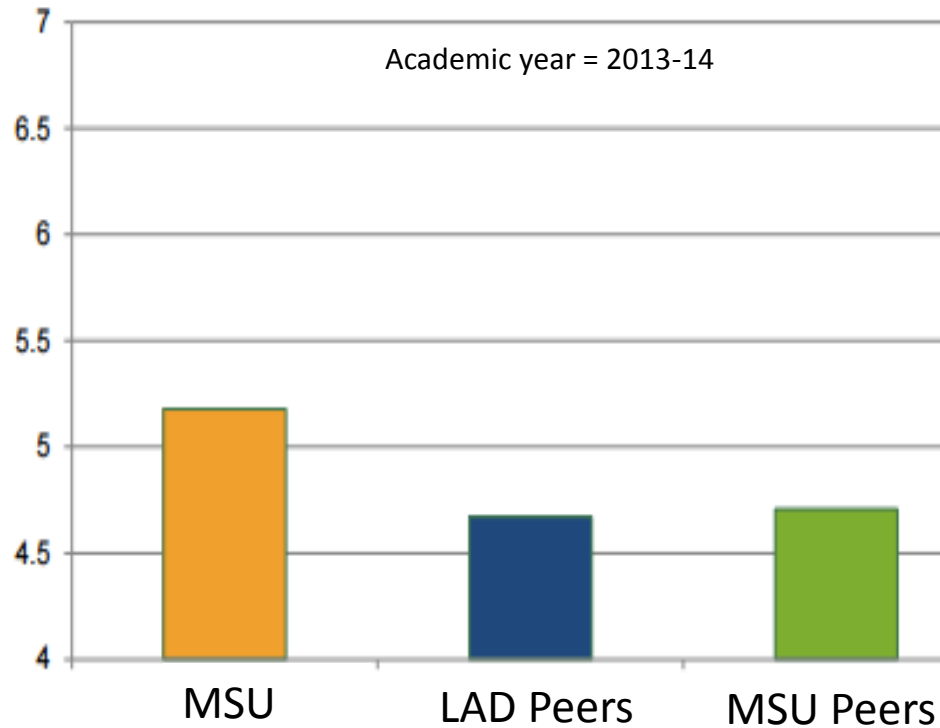
(includes Missoula College and FCES)



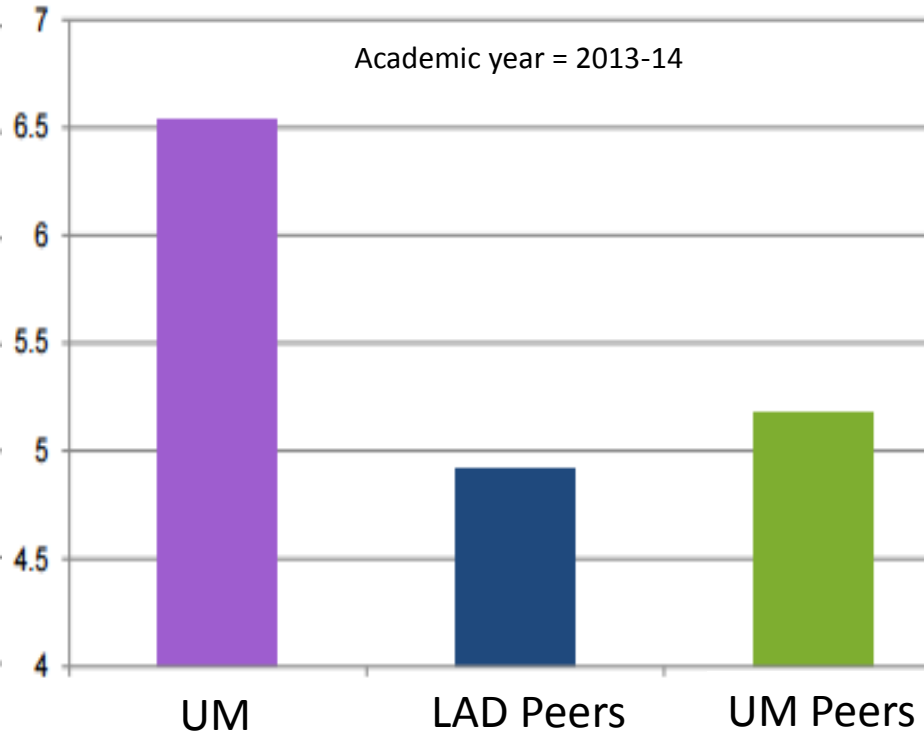
Peer Analysis

METRIC #2 - Student to Staff Ratio

Montana State University



University of Montana



Peer Analysis

CONCLUSION #1

CONCLUSION

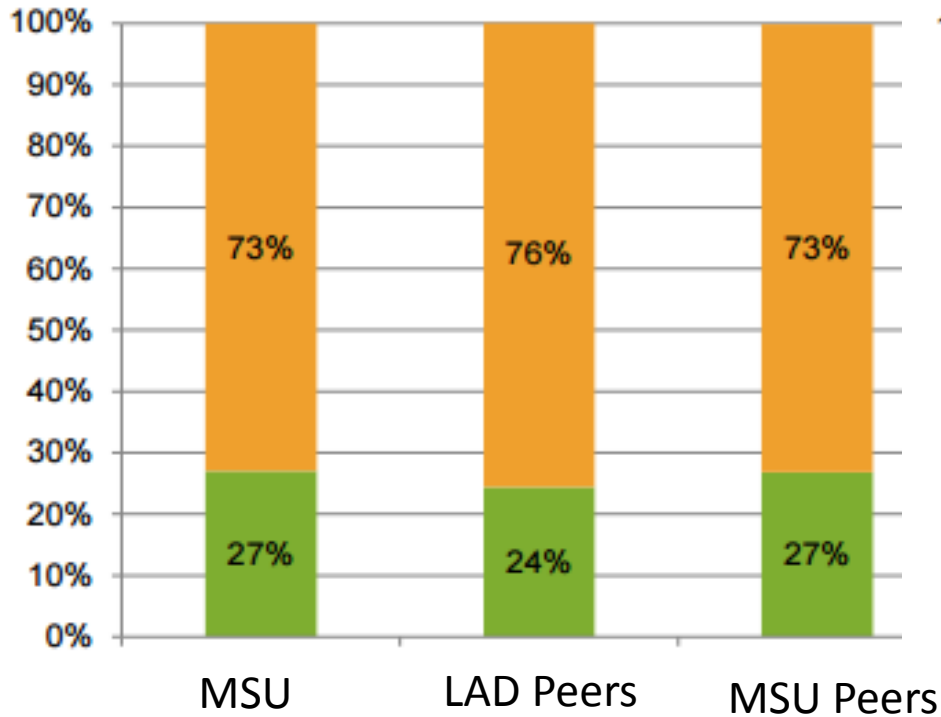
MSU and UM have fewer FTE overall and a higher student to staff ratio when measured against peer institutions around the country.

Peer Analysis

METRIC #3 – Instructional FTE Ratio ***Employee FTE based on “*all funds*”***

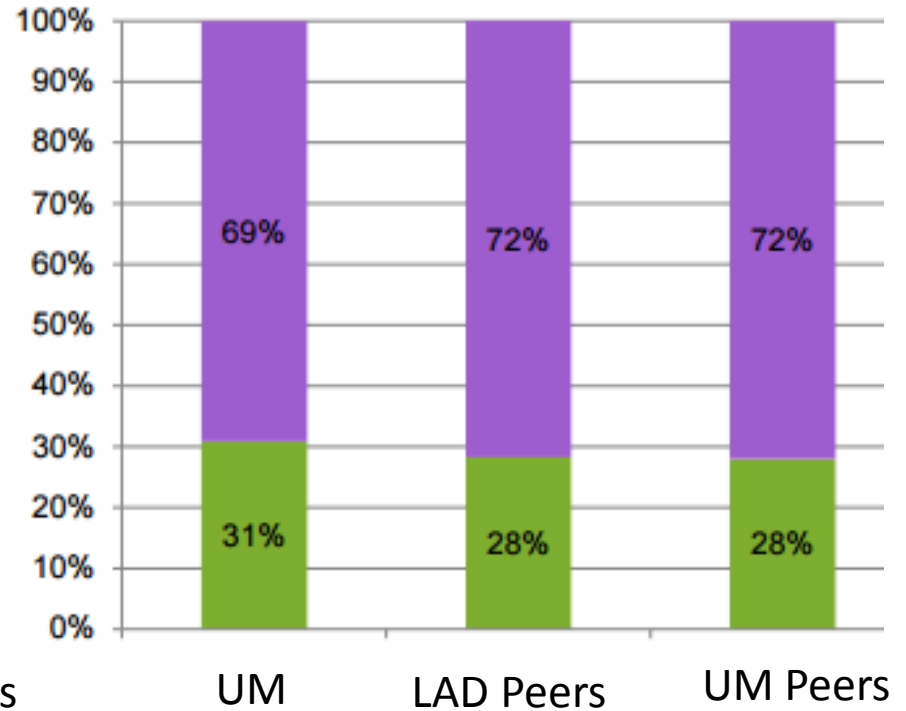
Montana State University

Academic year = 2013-14



University of Montana

Academic year = 2013-14



■ All Other FTE
 ■ Instructional FTE

■ All Other FTE
 ■ Instructional FTE

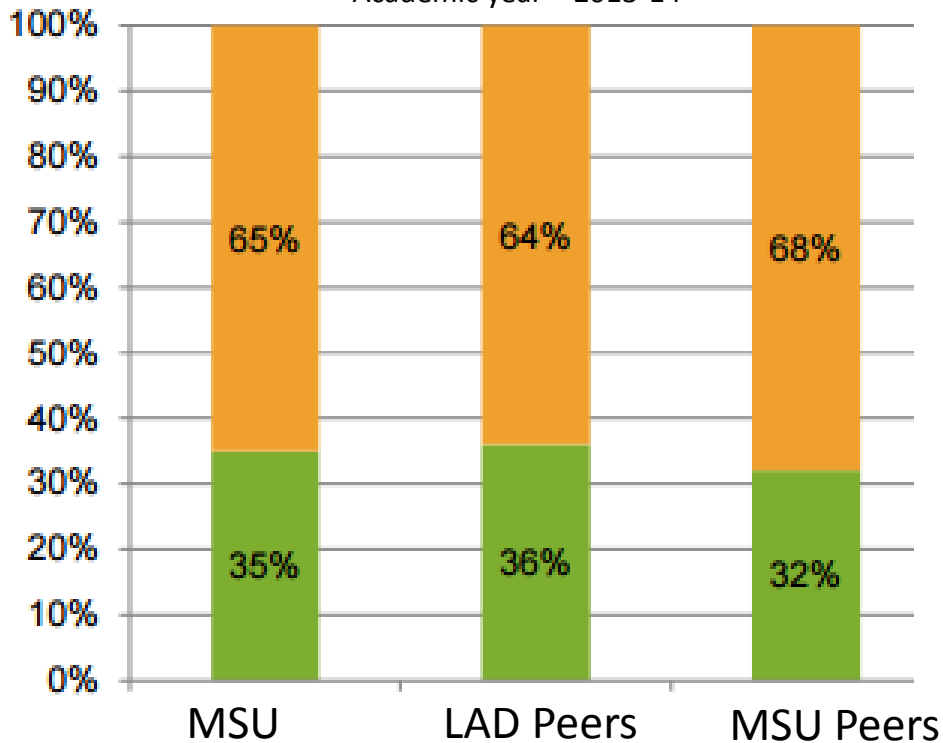
Peer Analysis

METRIC #3 – Instructional, Research, & Public Service FTE Ratio

Employee FTE based on “all funds”

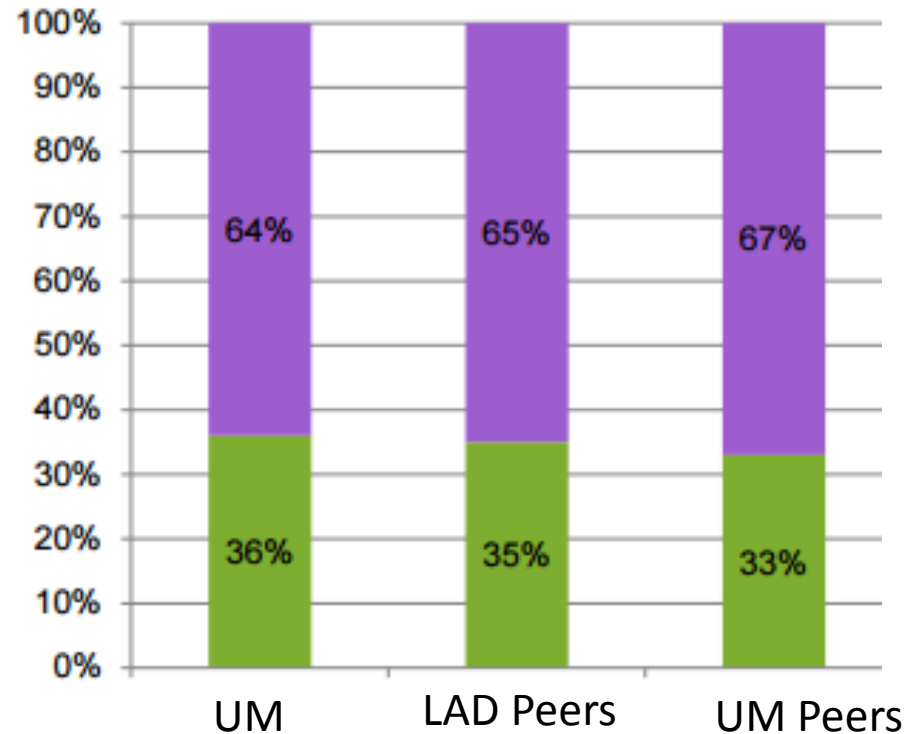
Montana State University

Academic year = 2013-14



University of Montana

Academic year = 2013-14



■ All Other FTE
 ■ Instructional FTE

■ All Other FTE
 ■ Instructional FTE

Employee FTE from “**Current Unrestricted Funds**”

Schedule 5							
MONTANA UNIVERSITY SYSTEM SUMMARY OF DETAIL OF FULL TIME EQUIVALENT EMPLOYEES CURRENT UNRESTRICTED OPERATING FUNDS FISCAL YEAR 2015 ACTUAL							
	Contract Faculty	Contract Administrative	Contract Professional	Classified	GTA / GRA	Part-Time and Other	Total
Montana State University							
Bozeman	683.50	26.30	284.34	470.02	148.50	120.30	1,732.96
Billings	216.43	31.60	53.24	134.13	7.33	11.41	454.14
Northern	77.35	7.00	41.77	44.75	-	13.48	184.35
Great Falls MSU	93.96	7.00	26.83	40.50	-	8.63	176.92
Agriculture Experiment Station	46.60	0.52	30.75	43.68	12.01	4.87	138.43
Extension Service	17.59	-	12.60	15.48	-	0.99	46.66
Fire Services Training School	-	-	5.19	1.92	-	-	7.11
MSU Subtotal	1,135.43	72.42	454.72	750.48	167.84	159.68	2,740.57
The University of Montana							
Missoula	658.35	50.24	146.61	546.89	158.43	93.89	1,654.41
Montana Tech	165.09	8.37	41.29	78.47	12.10	18.16	323.48
Western	77.37	6.96	21.01	46.51	-	1.65	153.50
Helena College	47.67	3.80	16.00	32.38	-	2.88	102.73
Bureau of Mines	-	1.00	31.83	13.85	1.32	6.86	54.86
Forestry Conservation Station	9.14	-	2.30	0.60	0.50	0.26	12.80
UM Subtotal	957.62	70.37	259.04	718.70	172.35	123.70	2,301.78
Commissioner of Higher Education							
Administration		13.50		4.50			18.00
Minority Achievement		1.00		-			1.00
CHE Subtotal		14.50		4.50			19.00
MUS System Total	2,093.05	157.29	713.76	1,473.68	340.19	283.38	5,061.35
% of Total	41%	3%	14%	29%	7%	6%	100%

MUS Operating Budget

Peer Analysis

CONCLUSION #2

CONCLUSION

MSU and UM have similar percentages of staff FTE tied to their core mission of instruction, research, and public service when compared to peer institutions.

Peer Analysis

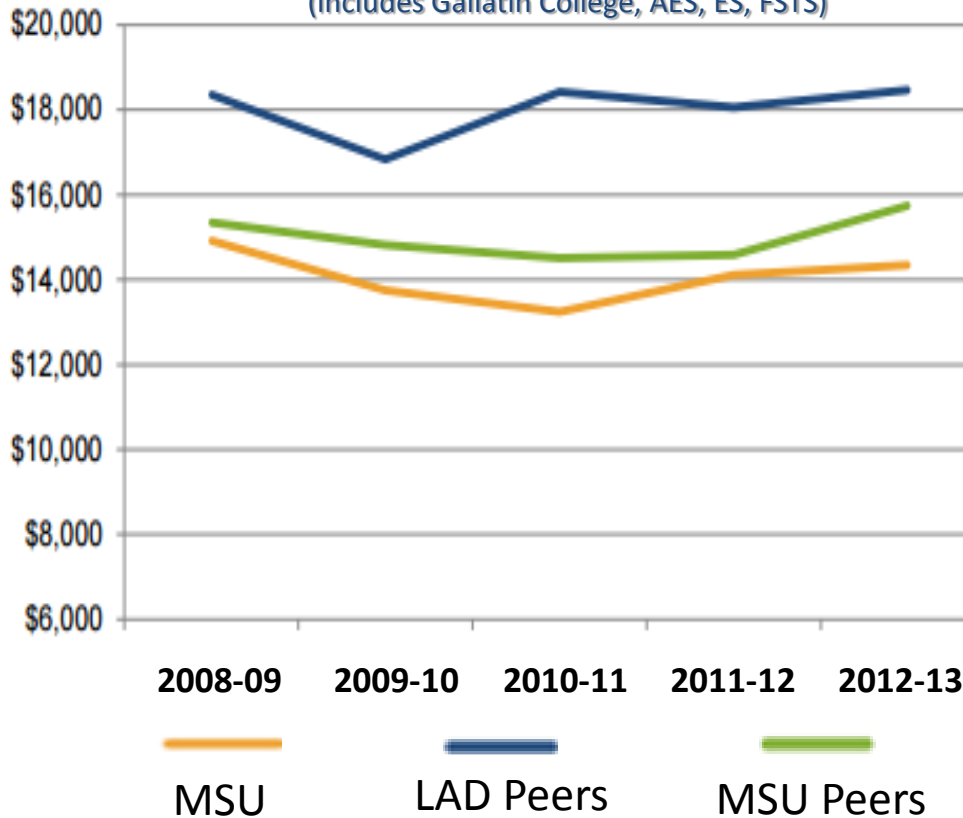
METRIC #4 – Instructional Support per FTE

Total Current Unrestricted Funds per FTE

(Net Tuition + State Appropriations)

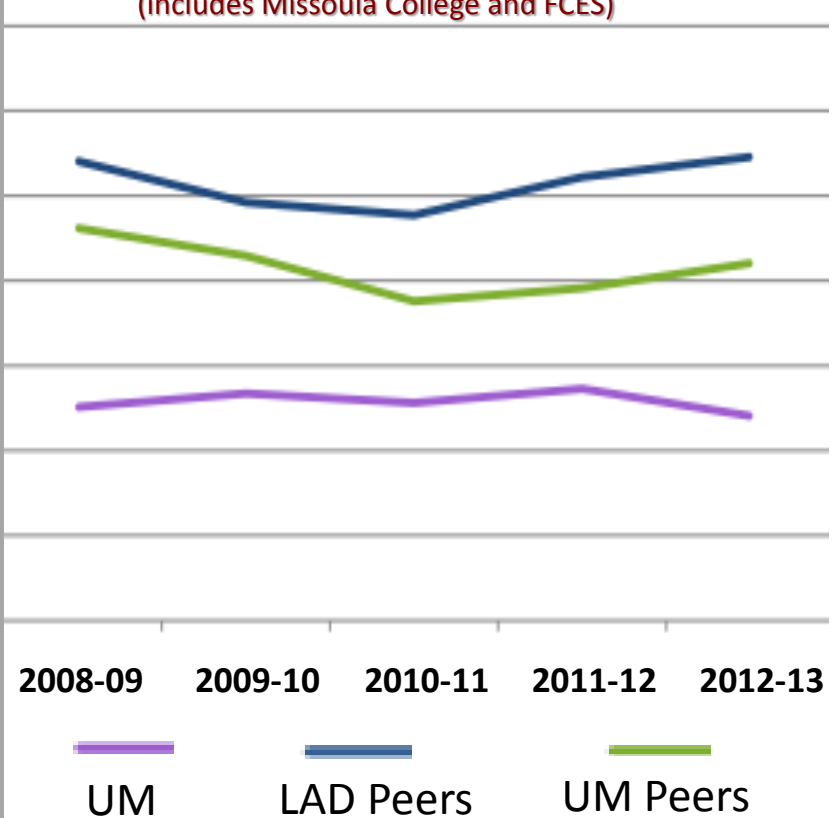
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University of Montana

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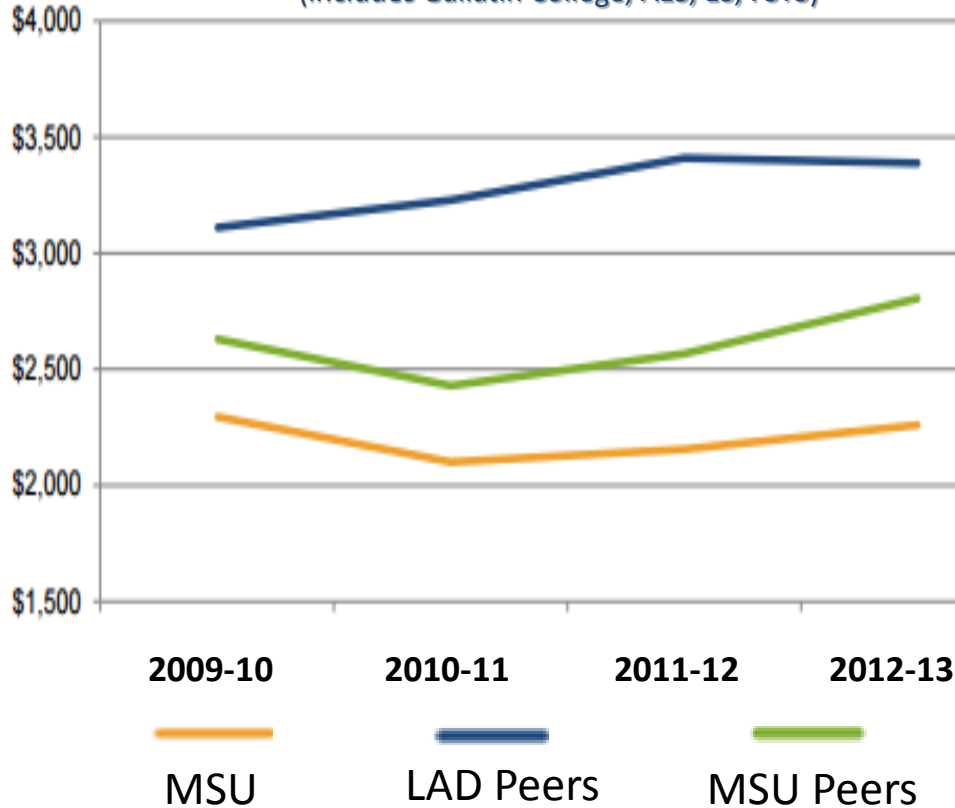
Peer Analysis

METRIC #5 – Administrative Costs per FTE

Expenditures in institutional support, academic support & student services per student FTE

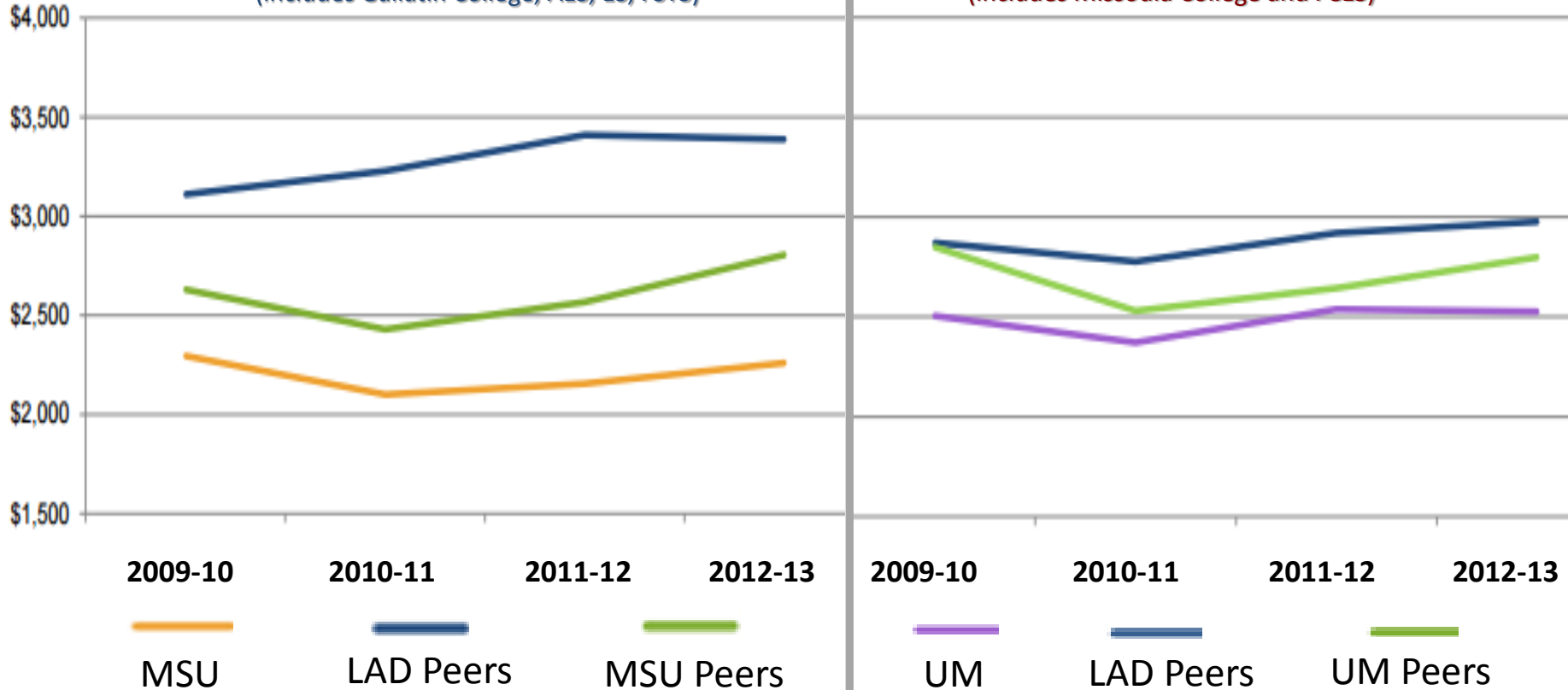
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Peer Analysis

CONCLUSION #3

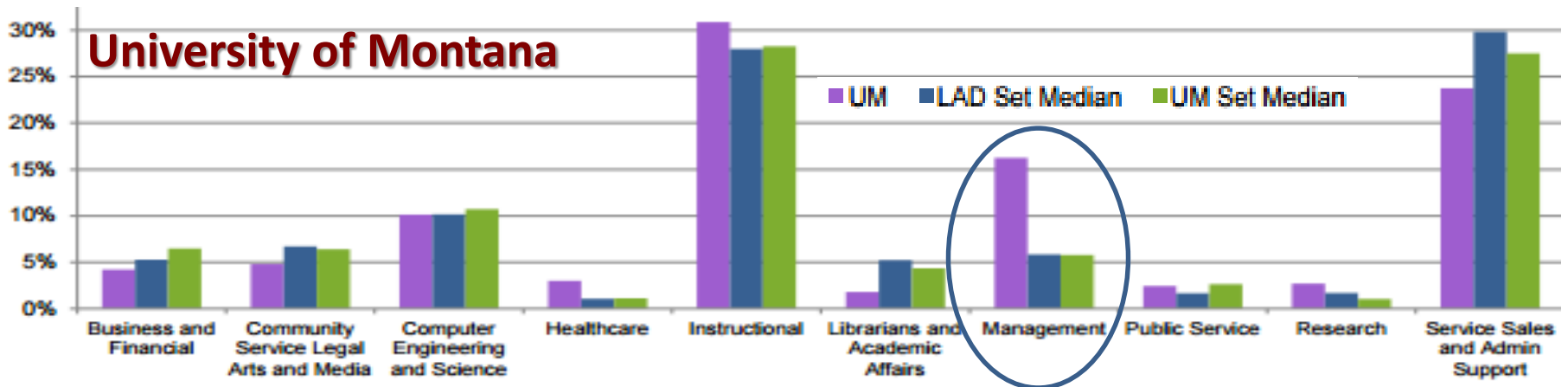
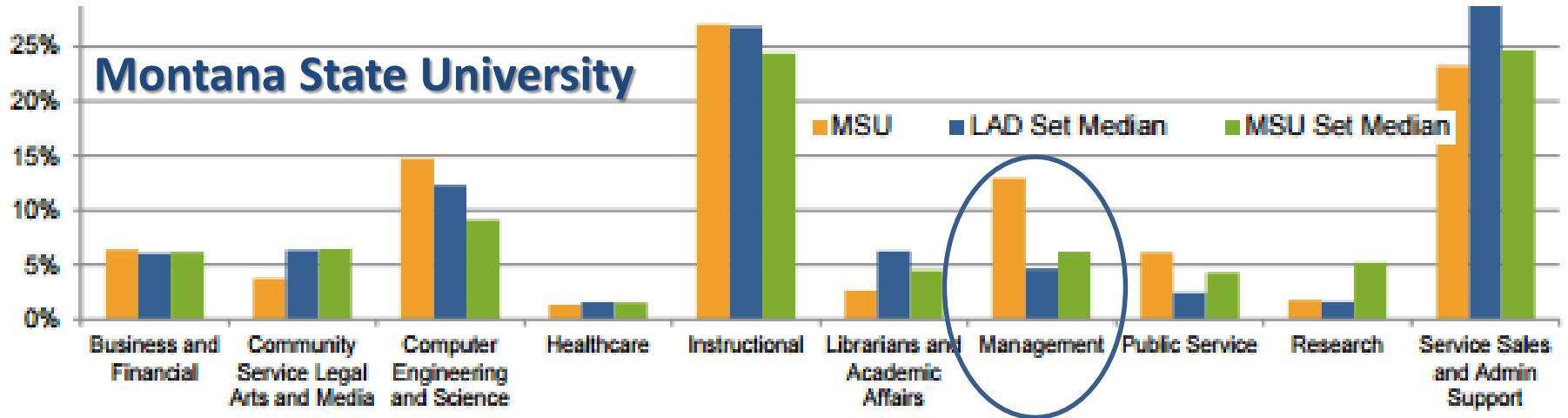


CONCLUSION

MSU and UM spend less on instructional and administrative costs per student FTE when measured against peer institutions.

Peer Analysis

METRIC #6 – Occupational Categories Comparison



Excerpt from Audit: “While this may lead to the conclusion there are too many management/administrative staff across the MUS, this may not be the case. When discussing this specific occupational category with other universities around the country, they reported having noticed similar comparisons related to their universities and have revised whom they classify as management.”

Peer Analysis

CONCLUSION #4

CONCLUSION

Although Montana's universities compare favorably to their peers in basic measures of administrative efficiency, changing priorities and increasing complexity in the higher education sector mean better workforce data and analysis need to be priorities for the Montana University System in the future.

Categorization Model

- Auditors assessed the availability and consistency of workforce/HR data in MUS

- Recognized that OCHE collects high level employee FTE and financial data (as seen in the Operating Budget report)
 - Contract Faculty, Administrators, Professional, Classified
 - Expenditure Categories: Instruction, Academic Support, Student Support, Institutional Support, O&M

- Concluded that the current method for grouping data in employment categories is not detailed or consistent enough to provide sufficient analysis

Categorization Model

- Auditors offered an example of a categorization model endorsed by CUPA-HR (College & University Professional Association for Human Resources)
- Job Categories (JCAT) Model
 - Provides a multi-layered coding framework for basic employment categories as well as more detailed coding based on function
- Auditors applied the JCAT model to a sample set of 264 positions at each campus
 - Used Banner fields to successfully code 92% of the sample
- Identified the benefits for adopting a similar type model:
 - Elimination of university level variances
 - Improved efficiency and compliance with external reporting
 - Consistent and streamlined data tracking
 - Continued flexibility for universities while maintaining category/function consistency that does affect job titles and/or pay

Categorization Model

RECOMMENDATION #1

We recommend the Montana Board of Regents, through the Office of the Commissioner of Higher Education, work with the Montana University System units to establish a system-wide categorization model that allows:

- A. *The Montana University System units to report workforce data in a consistent manner, and*
- B. *The Office of the Commissioner of Higher Education to obtain and validate workforce data for reporting purposes.*

MUS Response

We concur and will take the necessary steps to meet this recommendation, including the development of a **system-wide human resource data warehouse** maintained by OCHE, the implementation of a consistent **position categorization model**, and the development of procedures to ensure reliable and valid information. The MUS will establish a system-wide **human resource data taskforce** to develop and carry out a detailed action plan. Significant progress to be made within the next six months and a completed project by the **end of FY17**.

Banner & IPEDS Data

- Auditors evaluated whether Banner data are accurate and consistent.
 - Reviewed whether the Banner fields tied to the employee aligned with the HR's description of the positions' job duties

- Review found Banner data aligned with job duties for 87% of positions reviewed

- Examples of inconsistencies:
 - Job titles and position titles.
 - Position numbers.
 - The same position at the university level had different Banner data assigned.
 - Fields containing part-time and full-time data did not align.
 - Titles related to job, job descriptions, or position descriptions did not align.
 - Banner data was not updated when the employee changed positions.

Banner & IPEDS Data

RECOMMENDATION #2

We recommend the Montana University System units establish procedures to:

- A. Review current workforce Banner data to ensure it is accurate, and*
- B. Update workforce Banner data as individuals change positions.*

MUS Response

The MUS understands the importance of accurate Banner data and will take steps to establish and affirm the necessary procedures to ensure accurate workforce data in Banner. OCHE will begin immediately working with the MUS units to review workforce data in Banner and analyze current procedures, making changes where necessary. The majority of this work will be completed within the next year, however, this will be a business improvement process that will occur on a continuous and ongoing basis.

Banner & IPEDS Data

➤ Auditors evaluated the accuracy and consistency of IPEDS data

➤ Findings:

While MSU and UM largely report IPEDS employee data consistently, there are areas where they are reporting this data inconsistently.

These areas include:

- **Full-time versus part-time:** The two universities have different FTE cutoffs for separating full-time from part-time staff. One university uses a cutoff of 0.9 FTE, while another uses 1.0 FTE.
- **Level of categorization of instructional staff:** One university splits instructional staff into a) primarily instructional; and b) instructional combined with research or public service. However, the other university ignores the instructional combined with research or public service category and categorizes all instructional staff as primarily instructional

Banner & IPEDS Data

RECOMMENDATION #3

We recommend the Office of the Commissioner of Higher Education work with Montana University System units to:

- A. *Review and document current IPEDS reporting processes at each of the MUS units.*
- B. *Identify IPEDS reporting inconsistencies across Montana University System units.*
- C. *Establish and document a statewide level interpretation of IPEDS reporting guidelines.*

MUS Response

The Office of the Commissioner of Higher Education (OCHE) concurs with this recommendation.

IPEDS is a significant data resource and the MUS must have consistent and accurate data represented in this federal reporting system. OCHE will work with the campuses to develop and implement consistent system-wide procedures. This work is estimated to be completed within the next year.

HR Data Taskforce

GOAL

Establish consistent, accurate, and accessible human resource information system-wide.

OBJECTIVES

- 1) Adopt and implement a single, system-wide employee categorization model.
 - Apply a new consistent system-wide coding scheme to all current employee records
 - include general employment categories as well as functional descriptions
 - Adopt procedures/controls to ensure consistency and accuracy
- 2) Create a centralized HR data warehouse.
 - Establish a warehouse designed to meet specific reporting and monitoring requirements; ex. operating budget reports, state required snapshot, IPEDS
- 3) Address all unmet recommendations from legislative audit
 - Consistent IPEDS reporting
 - Ensure data in Banner is updated and accurate