

STATE BOARD OF COMMUNITY COLLEGES
Analysis of Learning Management System Costs
FY 2022-23

During the May 2022 State Board of Community Colleges meeting System Office staff were instructed to provide cost analysis and a recommendation regarding system support for a single learning management system (LMS). This report reflects LMS expenditures for System Office contracts. This report does not contain local community college LMS total cost of ownership.

Strategic Plan References:

Theme: Student Interest and Access

Goal 3: Identify and reduce access barriers for all prospective students, particularly among underserved populations.

- Objective 2: Promote more flexible scheduling and instructional delivery formats to reach non-traditional students.

Theme: System Effectiveness

Goal 4: To advance organizational effectiveness, operations, and decision-making in order to support a cohesive system of nimble, empowered and community-driven colleges.

Background: In March 2010, the North Carolina Community College System Office was approved by the State Board of Community Colleges to support two LMS for the 58 community colleges. The System Office operates and maintains two LMS contracts available for use by the 58 community colleges: Blackboard®, a licensed LMS, and Moodle®, an open source LMS.

The LMS is a critical teaching and learning resource for the 58 community colleges and the NCCCS enterprise resource planning (ERP) solution. The LMS provides:

- Content hosting for instructional services
- Teaching tool integration
- Student access to coursework
- Student coursework submission
- College Information System integration
- Reporting and analytical tools

Each community college chooses the LMS that best suits the needs of that community college and the learning community it serves.

As of July 2022:

- 33 community colleges are using the NCCCS Moodle® Open LMS contract
- 15 are using the NCCCS Blackboard® contract
- 10 have college contracts with other LMS providers not supported by System Office contracts

NCCCS LMS Cost

The total expenditure for System Office LMS contracts is \$1,742,960.

Vendor	Product	2022 - 2023 Cost
Blackboard Inc.	Blackboard Learn®	\$721,190
Learning Technologies Group	Moodle® Open LMS	\$1,021,770
		\$1,742,960

Moodle® Open LMS - Contract Cost

The State Board of Community Colleges approved FC 06 at its May 2022 meeting for an amount not to exceed \$1,021,770 for Moodle® Open LMS software, hosting, and bundled services for FY 2022-23. This approval provides 139,000 active users and 14 terabytes of storage to the NCCCS. Additional user accounts above and beyond 139,000 are \$6 each. Each additional terabyte of data storage above and beyond 14 terabytes is \$4,000.

The table below contains additional active users, data storage, and costs beyond contracted amounts (overages) for the past two fiscal years. Overage amounts vary annually depending on the number of active user accounts, data storage, and community colleges using the contract.

2020-21 Overage Amounts and Additional Costs		2021-22 Overage Amounts and Additional Costs	
<i>100,117 Users & 58 TB</i>	<i>\$832,702</i>	<i>31,000 Users & 52.25 TB</i>	<i>\$395,000</i>

Blackboard® - Contract Cost

The State Board of Community Colleges approved FC 05 at its May 2022 meeting for an amount not to exceed \$1,429,086 for licenses for Blackboard Learn, help desk services for all 58 community colleges, System Office LMS hosting and Collaborate web conferencing services. Of this approval, \$721,190 is for the Blackboard® Learn licenses for the 15 community colleges using this contract. Services other than Blackboard Learn® LMS Licenses are required should the Blackboard Learn® LMS licenses not be renewed. The table below contains contract details.

Combined Blackboard Services	Cost
Blackboard Learn® LMS Licenses	\$721,190
Help Desk Services for All NCCCS College LMS	\$501,097
System Office LMS Hosting	\$5,595
Collaborate® Web Conferencing	\$30,082
Account Management	\$171,122
	\$1,429,950

Community colleges using Blackboard® are required to pay for hosting and other integrated services, which is above and beyond the license cost.

Cost Analysis for Single LMS Funding and Support Model

Estimated System Office Cost to Migrate All NCCCS Community Colleges to Moodle® Open LMS

System Office staff requested information from Learning Technologies Group (product owner of Moodle® Open LMS) to estimate costs for those community colleges not currently using the Moodle® Open LMS contract to migrate to the platform.

Two migration costs were identified:

- Moodle®/Learning Pool to Moodle® Open LMS - \$8,000 per college
- Non-Moodle® based platforms (Blackboard®, D2L®, Canvas®, Sakai®) to Moodle® Open LMS - \$10,500 per college

Estimated System Office Cost to Migrate 25 NCCCS Community Colleges to Moodle® Open LMS

Estimated Cost to Migrate 25 NCCCS Community Colleges to Moodle® Open LMS				
<i>Community College</i>	<i>Current LMS</i>	<i>2021-22 Active Average Users</i>	<i>Estimated Migration Cost</i>	<i>Estimated New Active Average User Cost</i>
Beaufort County	Bb	3,218	\$10,500	\$19,308
Brunswick	Moodle/Learning Pool	1,553	\$8,000	\$9,318
Cape Fear	Bb	13,327	\$10,500	\$79,962
Catawba Valley	Bb	6,516	\$10,500	\$39,096
Central Carolina	Bb	6,774	\$10,500	\$40,644
Central Piedmont	D2L	16,668	\$10,500	\$100,008
Cleveland	Bb	3,343	\$10,500	\$20,058
Coastal Carolina	Bb	5,459	\$10,500	\$32,754
Craven	Moodle/Learning Pool	2,629	\$8,000	\$15,774
Durham Technical	Sakai	4,672	\$10,500	\$28,032
Fayetteville Technical	Bb	13,971	\$10,500	\$83,826
Forsyth Technical	Bb	10,999	\$10,500	\$65,994
Gaston College	Bb	7,398	\$10,500	\$44,388
Guilford Technical	Canvas	10,821	\$10,500	\$64,926
Halifax	Bb	1,419	\$10,500	\$8,514
Haywood	Moodle/Learning Pool	1,440	\$8,000	\$8,640
Johnston	Bb	5,663	\$10,500	\$33,978
Montgomery	Bb	1,088	\$10,500	\$6,528
Pamlico	Moodle/Learning Pool	362	\$8,000	\$2,172
Piedmont	Bb	1,881	\$10,500	\$11,286
Rowan-Cabarrus	Bb	9,440	\$10,500	\$56,640
Sampson	Moodle/Learning Pool	1,492	\$8,000	\$8,952
Stanly	Canvas	2,432	\$10,500	\$14,592
Vance-Granville	Moodle/Learning Pool	2,963	\$8,000	\$17,778
Wake Technical CU	Bb	31,746	\$10,500	\$190,476
Wake Technical - CE	eThink/Open LMS	6,500	\$3,000	\$39,000
		173,774	\$250,500	\$1,042,644

Summary Analysis	
Estimated one time migration cost for all 25 community colleges	\$250,500
Estimated annual cost for additional active average user cost <i>User Average is calculated annually (total of all monthly total active users divided by 12)</i>	\$1,042,644
2022-2023 Moodle® Open LMS Base Contract Cost <i>Currently supporting 33 community colleges</i>	\$1,021,770
Estimated Overage Cost <i>2021-22 Overage Cost Based on Enrollment</i>	\$395,000
Estimated Additional Storage Cost <i>Additional storage cost based on data reported by colleges currently using Blackboard. Storage varies based on enrollment and number of online courses provided by the college.</i>	\$288,000
Estimated year one contract cost <i>Migration + New User + Base + Estimated Overages costs = Estimated year one cost</i>	<u>\$2,997,914</u>
Cost avoidance from Blackboard® Contract	(\$721,190)
Estimated Year One Cost for All Colleges to Transition to Moodle® Open LMS <i>Estimated annual contract cost – Blackboard contract cost = Estimated Cost for All Colleges This cost will be reduced by one time migration cost amount in subsequent years.</i>	\$2,276,724
Estimated Year Two Cost	\$2,026,224

Estimated System Office Cost to Migrate Colleges Using Blackboard® to Moodle® Open LMS

Estimated Cost to Migrate 15 NCCCS Community Colleges from Blackboard® to Moodle® Open LMS				
<i>Community College</i>	<i>Current LMS</i>	<i>2021-22 Active Users</i>	<i>Estimated Migration Cost</i>	<i>Estimated New Active Average User Cost</i>
Beaufort County	Bb	3,218	\$10,500	\$19,308
Cape Fear	Bb	13,327	\$10,500	\$79,962
Catawba Valley	Bb	6,516	\$10,500	\$39,096
Central Carolina	Bb	6,774	\$10,500	\$40,644
Cleveland	Bb	3,343	\$10,500	\$20,058
Coastal Carolina	Bb	5,459	\$10,500	\$32,754
Fayetteville Technical	Bb	13,971	\$10,500	\$83,826
Forsyth Technical	Bb	10,999	\$10,500	\$65,994
Gaston College	Bb	7,398	\$10,500	\$44,388
Halifax	Bb	1,419	\$10,500	\$8,514
Johnston	Bb	5,663	\$10,500	\$33,978
Montgomery	Bb	1,088	\$10,500	\$6,528
Piedmont	Bb	1,881	\$10,500	\$11,286
Rowan-Cabarrus	Bb	9,440	\$10,500	\$56,640
Wake Technical CU	Bb	31,746	\$10,500	\$190,476
		122,242	\$157,500	\$733,452

Summary Analysis	
Estimated one time migration cost for all 15 community colleges	\$157,500
Estimated annual cost for additional active average user cost <i>User Average is calculated annually (total of all monthly total active users divided by 12)</i>	\$733,452
2022-2023 Moodle® Open LMS Base Contract Cost <i>Currently supporting 33 community colleges</i>	\$1,021,770
Estimated Overage Cost <i>2021-22 Overage Cost Based on Enrollment</i>	\$395,000
Estimated Additional Storage Cost <i>Additional storage cost based on data reported by colleges currently using Blackboard. Storage varies based on enrollment and number of online courses provided by the college.</i>	\$288,000
Estimated year one contract cost <i>Migration + New User + Base + Estimated Overages + Estimated Storage costs = Estimated year one cost</i>	<u>\$2,595,722</u>
Cost avoidance from Blackboard® Contract	(\$721,190)
Estimated Year One Cost for Blackboard Colleges to Transition to Moodle® Open LMS <i>Estimated annual contract cost – Blackboard contract cost = Estimated Cost for Blackboard Colleges. This cost will be reduced by migration cost amount in subsequent years.</i>	\$1,874,532
Estimated Year Two Cost	\$1,717,032

Analysis Summary of System Office LMS Contract Costs		
	Estimated Cost to Migrate 25 NCCCS Community Colleges to Moodle® Open LMS	Estimated Cost to Migrate 15 NCCCS Community Colleges from Blackboard® to Moodle® Open LMS
Estimated Annual Contract Cost	\$2,997,914	\$2,595,722
Current Contract Cost <i>Blackboard® Licensing and Moodle® Open LMS Contract Cost</i>	\$1,742,960	\$1,742,960
Estimated Contract Cost Difference	\$1,254,954	\$852,762
<less> Cost avoidance <i>Current Blackboard® Contract</i>	(\$721,190)	(\$721,190)
Estimated Contract Cost Difference	<u>\$533,764</u>	<u>\$131,572</u>

System Office contract costs are estimated to increase by the amounts above. It is important to note these estimated contract costs include local college overage and storage costs for FY 2021-22. These costs are variable and determined by enrollment and course content operated and maintained by local community college faculty and staff. Community colleges incur costs in addition to System Office contracts. To determine total obligations using general fund appropriation for LMS, individual community college cost should be considered.

Recommendation:

To assist the State Board of Community Colleges in their review of LMS contracts, it is the recommendation of the System Office for System Office staff to create a financial impact plan to include all LMS obligations using general fund appropriations.

If this recommendation is accepted by the State Board of Community Colleges, the System Office will facilitate collaboration between the North Carolina Association of Community College Presidents, community college Distance Learning Administrators, and System Office staff. The financial impact plan will include overall LMS system financial impact, direct costs, indirect costs, resource, and staffing requirements should the system support a single learning management system (LMS).

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