

## **A Comparison of Learning Management Systems**

Prepared by the Learning Management System Subcommittee  
of the Distance Learning Advisory Committee  
for Dr. G. Garry Warren, *Vice-President for Academic Affairs and Provost*

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## Executive Summary

Dr. G. Garry Warren, Vice-President for Academic Affairs and Provost, requested that the Distance Learning Advisory Committee analyze the Learning Management Systems (LMS) currently available. A subcommittee was formed to conduct this analysis. The purpose of this report is to provide information to Dr. Warren that will assist him in developing a comprehensive LMS strategy for UNA.

After an initial round of data collection, the list of suitable products for UNA was narrowed to Blackboard NG, the Angel Learning Management Suite (Angel), and eCollege. These platforms are widely used, scalable, meet the needs of both students and faculty, and offer (or are working on) integration with the Banner / Luminis system currently used by UNA.

The subcommittee invited all three vendors to campus in the Fall of 2008 to make presentations, and after review of these products the committee was able to make several observations:

- All three of the platforms offer an interface that is an improvement over our current Blackboard (WebCT) Vista LMS.
- Although there are differences, all three platforms would provide a level of features and usability that would meet the needs of UNA faculty.
- Integration with Banner, the backbone of UNA's unified digital campus strategy, is crucial and should be a mandatory feature of any LMS chosen by UNA.
- Blackboard appears to offer the highest level of integration with Banner, but recent talks with SunGard reveal that Angel provides a high level of integration as well. Further analysis is needed to verify the differences in detail. eCollege has assured UNA that they will do whatever is necessary to provide Banner integration.
- Blackboard NG has not announced final product availability, while both Angel and eCollege are ready for use (with Angel having the most polished interface at this point).

Given the fact that Blackboard has not released a timeline for the availability of Blackboard NG and that we are still analyzing Banner integration for Angel and eCollege, the most logical path would be for UNA to renew our contract with Blackboard for one more year. This would give our IT staff an opportunity to upgrade our campus to the latest version of our current product and allow us to be in a much better position when we transition either to Blackboard NG, Angel or eCollege.

According to our IT staff, an additional year of Blackboard availability will be necessary, even if we move to a new LMS, because of the need to keep current course material and records available. Blackboard has agreed to sign a one-year renewal at the same rate as last year. This

will allow UNA to monitor the progress of these platforms, conduct additional analysis on the best configuration and hosting setup for our campus, and make detailed plans for the transition.

Our suggestion is that the LMS Subcommittee immediately reconvene in order to follow the progress of all three LMS systems. If we do end up moving to Angel or eCollege and the decision can be made in the next few months (before our current Blackboard contract expires), then it might be possible to renew a contract with Blackboard only one time, especially if the contract could be renewed for 18 months. It is strongly recommended that we examine the Angel proposal and Angel's integration with Banner as rapidly as possible since their pricing for hosted service is so attractive. Since it is a hosted service and Angel appears to have Banner integration in place, we might be able to make a rapid switch to Angel and minimize our cost outlay with Blackboard at the same time. This solution would not only save the University money, but it would take some of the ongoing support workload off of our Computer Services department.

## **Introduction**

In the Fall of 2008 the Distance Learning Advisory Committee was charged by Dr. G. Garry Warren, Vice-President for Academic Affairs and Provost, to investigate the various Learning Management Systems (LMS) commercially available and make recommendations regarding the advantages and disadvantages of each LMS and its suitability for use at UNA. An LMS subcommittee was formed and this report is the result of the work they conducted during the 2008 – 2009 academic year.

The initial motivation for this study was the fact that our current vendor, Blackboard, had indicated that there would be a large increase in licensing fees for our contract renewal as they moved clients from current versions of their LMS to Blackboard NG. Since it appeared that there would have to be a large expenditure of money and a transition to a new product no matter what, it seemed a wise time to examine all the LMS options available to UNA. Subsequently, Blackboard has notified UNA that our license renewal would be at the same rate that we are currently paying and that migration to NG would be included as part of the renewal. The renewal of our license with Blackboard would in essence mean staying with the system we already have, but with modules being upgraded periodically until a total switch is made to the new NG product. In any case, periodic review of all of our options is essential.

The committee first compiled a list of the LMS platforms available and conducted some initial research on each in order to determine if they met the basic qualifications established by the committee. In order to pass this first round of elimination and warrant further analysis, the LMS has to meet the following qualifications:

- Wide user base
- Scalability
- No requirement for extensive custom programming
- Vendor stability
- Current or proposed integration with SunGard Luminis / Banner
- Learning outcomes management and reporting

The systems that met these requirements were:

- Blackboard NG ([www.blackboard.com/sites/projectng/Default.aspx](http://www.blackboard.com/sites/projectng/Default.aspx))
- Angel Learning Management Suite ([www.angelllearning.com](http://www.angelllearning.com))
- eCollege ([www.ecollege.com](http://www.ecollege.com))

After narrowing our search to these three platforms, the committee invited each vendor to come to campus and demonstrate the latest version of their product and discuss the migration process, technical support, hardware requirements, etc.

### **Initial Impressions from the Presentations**

#### Blackboard NG

While the marketing materials touting Blackboard NG are very impressive, the sense that the committee got from the Blackboard NG presentation is that this product still has a long way to go in the development process. The interface has a modern Web 2.0 (see Exhibit One) feel to it and it appears that the final product will be fairly intuitive and very powerful. The LMS can be hosted on our servers or by Blackboard, although the latter alternative often has a high price tag associated with it. It will be impossible to fully evaluate NG until we can see more of the final product, but the initial impression is that it will be a very capable platform.

#### **Exhibit One**

According to O'Reilly Media, a Web 2.0 platform will have the following characteristics:

- Services, not packaged software, with cost-effective scalability
- Control over unique, hard-to-recreate data sources that get richer as more people use them
- Trusting users as co-developers
- Harnessing collective intelligence
- Leveraging the long tail through customer self-service
- Software above the level of a single device
- Lightweight user interfaces, development models, AND business models

## Angel

The Angel Learning Management Suite is the most fully developed of the three choices at this point. It appears to have the most intuitive and polished interface and, like Blackboard, it is a modern Web 2.0 platform. Unlike the Blackboard presenters, the Angel team was able to demonstrate all modules of their system and the general consensus of the committee was that the Angel system would also be a very powerful and capable platform. Angel can be hosted by UNA or by the vendor.

## eCollege

While the eCollege LMS wasn't as polished looking as Angel or Blackboard NG it appeared to have good functionality and would meet the needs of the vast majority of users on campus. The primary selling point of eCollege appeared to be the fact that all hosting is provided by eCollege and that there is 24/7/365 technical support available that is provided by eCollege to UNA faculty, staff and students. Hosting by eCollege is the only option available with this platform. This is an expensive option and further analysis is warranted to determine whether or not it is cost effective.

## **Primary Decision Criteria**

While it is important that the LMS we choose have an intuitive interface, powerful reporting capability, and other features that allow a high level of usability, it is necessary that we consider each LMS in the context of the environment in which it will be used at UNA. Integration with current UNA systems and other factors will be reviewed and discussed below.

## **Integration with Luminis / Banner**

Integration with Luminis / Banner is crucial for any platform that will be used at UNA. A lack of integration will result in a much less useful product that requires more work on the part of users and our technical staff as well. UNA has made a tremendous commitment, both financially and in human capital, to the Banner system and it would be unwise to invest in an LMS that does not natively "talk" with both the Banner and Luminis systems.

The SunGard website lists those companies and systems that have made an effort to integrate their products with various SunGard products. Blackboard and Angel are both listed as Collaborative Members. (See Exhibit Two) Collaborative Membership is the base level of three levels of certification with SunGard. Blackboard is listed as having products compatible with *Banner Student, Integration for eLearning, Plus* and *Luminis*. Angel is listed as having products compatible with *Banner Student* and *Integration of eLearning*. eCollege is not listed on the

SunGard website at all, however it should be noted that both Angel and eCollege have assured the committee that full Banner integration is something they are working on and will commit to provide. **The committee recommends that this be handled by contract since we certainly cannot verify the intent or progress of the vendors at this point and all projects of this sort tend to drag on for much longer than initially envisioned.**

Comments from Committee Discussions on Integration

Randall Horn – *Director, Computer and Telecommunications Services*

We have seldom experienced an easy 3rd party integration. The \$25,000 referenced (see eCollege proposal) seems like enough to provide training, education and some technical support on the academic side. Integration with the UNAPortal is one thing and might be easy, but integration with Banner will not be easy. Our experience is that integrating with Banner is not easy even if 900 schools have done it before us. I certainly would not look forward to being a beta site. That could drag on for a year. I would be anxious about this part even if integration was offered for free but I am even more worried that it is not mentioned at all. eCollege will have to put a LOT of effort into a Banner interface.

## Exhibit Two: Standards for SunGard Collaborative Membership

To be a **Collaborative Member**, a company must:

- Complete the online application and assessment process
- Have a Higher Education focus (based on number of customers in the higher education industry)
- Have at least 10 mutual customers with SunGard Higher Education
- Have at least 5 referenceable higher education customers or have been referred to SunGard Higher Education by a customer
- Have implementation and support services adequate to meet customer needs
- Offer solutions that are not competitive with SunGard Higher Education offerings
- Sign the member program agreement and pays the annual program fee

Campus Applications Specific Requirements:

- Offer software products that extend or enhance SunGard Higher Education products and that are a natural fit for integration with our products
- Complete basic integration according to SunGard Higher Education best practices during first year of program membership

Reporting and Business Development Specific Requirements:

- Have at least two (2) higher education customers using their reporting solutions with Banner ODS, and preferably two more with Banner EDW, with one serving as a reference
- Endorse the SunGard Higher Education Banner ODS and Banner EDW solutions as the preferred warehousing and operational data store solutions within the Higher Education industry
- Endorse SunGard Higher Education's recommendation of reporting off of Banner ODS and Banner EDW as the preferred reporting method
- Encouraged, but not required to develop a demonstration package with the Reporting Development Kit (RDK)

All Members within the Campus Applications category are expected to complete integration to specified SunGard Higher Education products according to SunGard Higher Education integration best practices. SunGard Higher Education will support members in their effort through education and information.

<http://www.sungardhe.com/partners/detail.aspx?id=1340>

## **Difficulty of Transition**

For any vendor we select, whether it is Blackboard NG, Angel or eCollege, time is a factor. Selecting new hardware and the installation of hardware and software is time-consuming and must be done carefully. A project of this magnitude would require several months of project planning, months to install/implement, and then months to test before going into general use. **It should be noted that choosing a vendor-hosted system will cut several months off of the implementation process and substantially lessen the burden on UNA's IT personnel both during and after implementation.**

Although all three vendors promise an easy transition from our existing Blackboard (WebCT Vista) platform to the new LMS it is the consensus of the committee that migrating to Blackboard NG would be by far the easiest. There would be no necessity to move data or rebuild course content and the transition would require the least direct faculty involvement.

## **Ease of System Administration**

The primary system administration difference between the three platforms is where the administration takes place. With both Blackboard NG and Angel, administration and hosting could be provided by UNA or by the vendor; with eCollege the administration can be handled only by eCollege personnel. There are advantages and disadvantages to both. The advantage of vendor hosting and administration is that UNA would not need as many IT professionals to administer the LMS, but a downside is that we would have to request that changes be made (and then be at the mercy of the vendor to get the changes accomplished). With Blackboard and Angel, UNA IT staff could make the changes as soon as they decide they are necessary, but UNA would have to have adequate staff and hardware available to manage the system. It is almost impossible to scale up resources when an emergency situation occurs such as it did at the beginning of the 2008-2009 academic year.

## **Pricing and Additional Hardware Requirements**

### Blackboard

The pricing for staying with our current Vista platform would initially be exactly the same as last year, \$139,271. Blackboard is in the process of working up a three-year proposal for UNA that would include the transition to Blackboard NG. It should be noted that, while Blackboard will not be charging drastically higher licensing fees for NG, the transition would require all new servers, new load balancers, and disk storage space. Although this would be an additional expense it could be done over time and would not represent a radical departure from the expenses we currently incur.

## Angel

The pricing quote just received from Angel can be seen in Exhibit Three, below. Initially, the pricing looks very competitive, but more analysis is necessary to determine if the level of hosting services quoted is sufficient to meet our needs. The quote below is for Angel’s “Silver” level of hosting with XEI (Extended Enterprise Integration). The “Gold” hosting package is approximately \$10,000 more per year, but provides a much higher level of service. The technical support for both IT staff and faculty and students will also have to be reviewed.

According to the proposal received from Angel, “ANGEL XEI has proven integration with SunGard HE Banner and is in production use by many ANGEL customers. It has been tested in a production instance and is supported by SunGard for Banner 7.3 and forward. ANGEL supports the IMS specification 1.1.” UNA IT personnel have also held a conference call with both Angel and SunGard and have been assured by SunGard that the Angel LMS does integrate well with their products.

### **Exhibit Three: Unlimited User Site License - Hosted**

<b>5082 FTE</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Unlimited User Site License	\$38,000	\$40,300	\$42,700
XEI	\$7,600	\$8,100	\$8,550
Application Hosting Services - SILVER	\$42,500 -	\$41,000 -	\$43,000 -
	\$46,000	\$45,000	\$47,000
	SILVER AHS Promo Discount in Yr1		

## eCollege

eCollege has also provided a full three-year proposal. (See Exhibit Four) The annual cost per year for the three-year period is \$385,775 with the possibility of up to a 3% increase in years two and three. This proposal also includes hosting, tech support for students and faculty, and a \$25,000 credit that can be used for training or other added services. As with the other platforms, UNA would still have to provide personnel to work on the transition and work with the vendor to ensure Banner / Luminis integration. eCollege appears to have made the least progress on providing true integration with Banner and Luminis, but they have verbally committed to hire Banner consultants to handle whatever is necessary to provide integration. Their quote does include all tech support for faculty and students whereas the Blackboard

quote does not. It is not clear at this time who would provide that support under the Angel proposal.

**Exhibit Four: eCollege Proposal**

Terms	<u>Pricing/Description</u>
<b>Contract Length</b>	Three (3) year agreement
<b>Campus Gateway Hosting &amp; License</b>	Included
<b>Learning Management Platform Enterprise License</b>  - <i>Nominal annual increase</i>	\$385,775 per year  <i>No more than 3% per year</i>
<b>Content Manager</b>	Included
<b>Enterprise Reporting</b>	Included
<b>Learning Outcomes Manager</b>	Included
<b>Evaluations</b>	Included
<b>24x7x365 technical support</b>	Included
<b>Course Conversions</b>	Included

## Comments from Committee Discussions on Pricing

### *Wanda Bradford – Chair, Nursing Online Department*

1. I think we need to compare the actual costs per student of our current system, including hardware, maintenance, staff, overtime due to technical failures, etc. Do we actually know what it costs per student? The proposal from eCollege, if implemented today, would cost a little less than \$53.00 per student, based on the approximate enrollment for Spring. As we grow in enrollments, the cost would decrease. For 8000 students, the cost would be \$48. Students currently pay a Technology Fee of \$12 per credit hour and \$60 per DL course.

With budget concerns that clearly will impact us more in the near future, we should consider what would happen in the case of catastrophic hardware failure. With eCollege, there are NEVER any hardware needs, never a charge for upgrades, no staff required for Help Desk (and would have 7/24/365 coverage including a “chat live” with help desk), no maintenance required, no additional charges for upgrades, and NO overworked staff. Has anyone really crunched the numbers? I believe the costs would be comparable, if not even less. Additionally, this price includes the Enterprise Reporting, Learning Outcome Manager and many other excellent features that are user friendly, robust tools that would be extremely valuable with our upcoming SACS review.

2. In regards to the \$25,000 service credit, this does not include integration. All integration costs will be provided by eCollege. In the case, that eCollege has not become full partners with Banner, they assured me they would hire a consultant FROM Banner to come to UNA to do the integration. The service credit would primarily be used by UNA for training faculty and it seems to me to be a generous amount.

3. eCollege verified to me verbally that they would do whatever is needed to create single sign-on with Luminis/SunGard. They can make that more clear in the proposal if requested.

4. eCollege verified to me verbally that ALL 1,685 courses or ever how many existed, would be migrated to eCollege and their technicians would perform this.

5. Above all, we should consider reliability. In my opinion there is no way to grow online programs without reliability (always works), robust instructional design tools that are intuitive, user-friendly, and involves significant interaction between faculty and students and student to student.

### *Randall Horn – Director, Computer and Telecommunications Services*

Our current budgetary constraints make it even more important for us to steward our resources. My assumption is that the yearly maintenance fee will be taken from the Technology budget. That budget is already about \$350,000 short of what we wished for purchases this year. At the most basic level the cost difference between eCollege and Blackboard/WebCT is \$245,000. The Technology budget could not absorb a \$245,000 yearly increase next year. That amount of money just about equals a one dollar

increase in the Student Technology fee. So from the beginning I must be honest and say I don't think we can afford eCollege at this time no matter how good it is.

I'm sure someone on the committee could perform a cost analysis better than I can but for me the bottom line is that it will not matter. I will not have \$245,000 more next year to invest in an LMS.

As Sara points out, performing a Blackboard/WebCT upgrade will cost some amount of money but no one can convince me it will be \$245,000. In addition, hardware upgrade costs should be spread out over a number of years so the average yearly cost is several times less than the total cost.

My staff is strained to the breaking point on some occasions just to keep WebCT running but I do not see purchasing a more expensive system (in real dollars versus averages) as a viable solution at this time.

*Randall Horn – Director, Computer and Telecommunications Services*

One more thing. **The existing interface between WebCT and Banner is just about priceless**, meaning I can't tell you how much I distrust purchasing a product with a promise of building an interface. We would be held hostage to that interface project long after we committed to eCollege with no hope of going back. The interface between Blackboard NG and Banner already exists. Please do not disregard or underestimate its value.

### **Learning Outcome Management and Reporting**

All three platforms appear to provide adequate tools for managing learning outcomes and providing reporting at class, department, college, and university levels.

### **Learning Curve and Acceptance by Faculty**

The general consensus of the committee is that faculty members could be successful with any of the three platforms. While there are differences (and Angel appears to be the most developed at this point), each provides a robust set of tools for course design and integration of both standard and multi-media material as well as interaction with other outside material such as social networking sites. If there were an advantage in this area it would likely go to Blackboard since faculty would be able to adjust to new tools and methods gradually. There is also a psychological advantage for Blackboard since most faculty members would view it as an upgrade of an existing product and not as a brand new technology they had to learn.

### **Technical Support**

Tech support is necessary for students and faculty as well as for our IT staff. With Blackboard the tech support for students would continue to be provided by UNA personnel while eCollege

would provide tech support to students and faculty as part of their package. It is unclear under the current proposal whether Angel provides student and faculty tech support with their hosted solution.

Blackboard support for UNA IT staff has been hit-and-miss under our current contract and at the current time we have been unable to verify the quality of Angel's support to client IT staff or the pricing for student and faculty tech support, if available. Since eCollege handles all the hosting and admin functions for their product it would lessen the need for IT tech support dramatically and this combined with their provision of student tech support probably gives them the edge in this category. Based on feedback from the Nursing Department (which currently uses eCollege), the level and quality of tech support from eCollege has been very high. The question will be how much this level of service will cost UNA and whether our staff could provide it more efficiently.

### **Time Line**

Our current contract is in effect with Blackboard through October 31, 2009. Assuming that we renew our contract with Blackboard that would give UNA until Fall 2010 to make and implement a decision on a new LMS. Discussions with IT staff on the committee indicates that ideally a decision should be made by the beginning of Fall 2009 which would allow time that semester to purchase software and hardware needed for the transition. The following Spring semester could be devoted to testing with staff and a few experienced faculty members, and then widespread testing could be conducted in the Summer term with a full rollout in Fall 2010. If a decision were made to go with eCollege or vendor hosting by Blackboard or Angel, then this timeline could be shortened by several months.

**Another consideration is the fact that if we choose Angel or eCollege then our current system will have to be maintained for an additional one to two years. This increases the cost of moving to Angel or eCollege dramatically, but a move might still be in the best interest of UNA depending upon Blackboard's cost structure and the features of the competition at that time. If we decide to move from Blackboard and either Angel or eCollege provide complete Banner-integrated in the near future then we might be able to limit our Blackboard renewal to 12 to 18 months. This would most likely only be possible if we chose eCollege or the hosted solution from Angel.**

### **Recommendations**

The committee's recommendations are very straightforward. We believe that it would be very premature to make a decision to move to Angel or eCollege at this time given the Banner / Luminis integration concerns noted previously. We also believe that it is too early to commit to

Blackboard NG given the limited exposure we have been able to get to the product. Our recommendation is to simply plan on renewing our contract with Blackboard for a period of 12 to 18 months. This will give us additional time during which we will monitor the progress of NG development and the Banner integration by Angel and eCollege. If sufficient progress has not been made by Fall of 2009 then it may be necessary to delay a decision past that point. The next several months can also be used to conduct additional analysis that will help to determine if UNA should continue hosting an LMS ourselves or allow our vendor to provide hosting and maybe technical support as well. As mentioned previously, there are advantages and disadvantages to both methods.

Another question that may also need to be addressed is whether or not our entire campus should be using one LMS. At the current time there are two different LMS used on campus and the argument could be made that it would be more efficient for UNA to use one system and also have a standard set of fees for all distance learning classes. This question was not a direct charge for this committee, but it does seem a very relevant factor to consider.

### **A New Possibility**

If Angel is truly as Banner-integrated as they indicate in the proposal we just received, and we can verify both the integration capability and the pricing advantage they seem to have on a hosted solution, then we might be able to make a decision to move to Angel as quickly as the end of the current semester (Spring 2009) and begin testing during Summer 2009, with parallel implementation during the 2009 – 2010 academic year. This would require some rapid decisions, but could mean that we would only have to renew our Blackboard contract one time, thus saving \$140,000 +/- . It would be wise to rapidly move forward with our analysis in order to determine if this is a wise course of action for UNA, but it is crucial that we have no doubts about Angel's integration with Banner / Luminis. We can't afford to make a mistake on this aspect of our LMS.

### **Conclusion**

The good news is that all three platforms appear to offer a robust way for faculty to handle both distance learning and on-campus classes and at the same time integrate more material into the classes more easily than ever before. It is just a question of waiting for a clear winner to emerge in terms of technology, integration, and affordability. In the meantime we have a very usable system that should become more stable over time as our IT staff updates the system and further integrates it into UNA's unified digital campus.