

CONTRACT #15

RFS # NA

FA # NA

Edison # NA

Tennessee Board of Regents

VENDOR:

Desire2Learn, Inc.



TENNESSEE BOARD OF REGENTS

Office of Business & Finance | Division of Purchasing & Contracts

1415 Murfreesboro Road, Suite 346 | Nashville, TN 37217-2833 | Phone 615.366.4436 | Fax 615.366.2243 | www.tbr.edu

October 15, 2013

Ms. Leni S. Chick
Fiscal Analyst
Rachel Jackson Building, 8th Floor
Nashville, TN 37243

Dear Ms. Chick:

Enclosed please find an Amendment between Tennessee Board of Regents and Desire2Learn, Inc. providing for the addition of a software license which enables students to evaluate their aptitude for potential courses and majors, with the goal of increasing student retention and graduation rates. Please note that this is a non-competitive Agreement to a previously competitive RFP process in which Desire2Learn, Inc. was the successful proposer and awarded the contract.

In addition, please be advised that TBR is currently working with the Tennessee Higher Education Commission (THEC) on the Bridge Program, which is a joint project between THEC, TBR and the Dept. of Education to provide an on-line course designed to provide high school students and adult learners with information they would need to enroll in college. This will also require an Amendment to our current D2L Agreement and should this be finalized prior to the November Fiscal Review Committee Meeting, we will submit that documentation as well.

Per Fiscal Review's request to see non-competitive agreements/amendments, this contract must be approved by the Committee. Please contact me regarding the date this will go before the Fiscal Review Committee and I will inform the representatives to insure they are present for the meeting in which the contract will be discussed. If you have any questions, please do not hesitate to contact me at 366-4436.

Information regarding the contract may be sent to my attention at the Tennessee Board of Regents, 1415 Murfreesboro Pike, Suite 346, Nashville, Tennessee 37217.

Sincerely,

Angela Gregory Flynn
Director of Purchasing and Contracts

cc: John Morgan
Dale Sims
Patrick Wilson
Lou Svendsen

Supplemental Documentation Required for
Fiscal Review Committee

*Contact Name:	Louis Svendsen	*Contact Phone:	615-366-3909		
*Original Contract Number:		*Original RFS Number:			
Edison Contract Number: <i>(if applicable)</i>		Edison RFS Number: <i>(if applicable)</i>			
*Original Contract Begin Date:	1/1/2014	*Current End Date:	12/31/2016		
Current Request Amendment Number: <i>(if applicable)</i>					
Proposed Amendment Effective Date: <i>(if applicable)</i>					
*Department Submitting:	Tennessee Board of Regents				
*Division:	Central Office				
*Date Submitted:	10/15/13				
*Submitted Within Sixty (60) days: <i>If not, explain:</i>	Yes				
*Contract Vendor Name:	Desire2Learn, Inc.				
*Current Maximum Liability:	\$12,614,517 (this Amendment \$886,657)				
*Current Contract Allocation by Fiscal Year: <i>(as Shown on Most Current Fully Executed Contract Summary Sheet)</i>					
FY: 2012	FY: 2013	FY: 2014	FY: 2015	FY: 2016	FY
\$2,265,250	\$2,295,569	\$2,700,774	\$2,628,127	\$2,671,547	\$
*Current Total Expenditures by Fiscal Year of Contract: <i>(attach backup documentation from STARS or FDAS report)</i>					
FY: 2012	FY: 2013	FY: 2014	FY: 2015	FY: 2016	FY
\$2,269,750	\$2,334,319		\$	\$	\$
IF Contract Allocation has been greater than Contract Expenditures, please give the reasons and explain where surplus funds were spent:					
IF surplus funds have been carried forward, please give the reasons and provide the authority for the carry forward provision:					
IF Contract Expenditures exceeded Contract Allocation, please give the reasons and explain how funding was acquired to pay the overage:					
*Contract Funding	State:	\$886,657.01	Federal:		

Supplemental Documentation Required for
Fiscal Review Committee

Source/Amount:			
Interdepartmental:		<i>Other:</i>	
If " <i>other</i> " please define:			
Dates of All Previous Amendments or Revisions: <i>(if applicable)</i>		Brief Description of Actions in Previous Amendments or Revisions: <i>(if applicable)</i>	
Method of Original Award: <i>(if applicable)</i>		competitive	
*What were the projected costs of the service for the entire term of the contract prior to contract award?			

Supplemental Documentation Required for
Fiscal Review Committee

For all new non-competitive contracts and any contract amendment that changes Sections A or C.3. of the original or previously amended contract document, provide estimates based on information provided the Department by the vendor for determination of contract maximum liability. Add rows as necessary to provide all information requested.

If it is determined that the question is not applicable to your contract document attach detailed explanation as to why that determination was made.

Planned expenditures by fiscal year by deliverable. Add rows as necessary to indicate all estimated contract expenditures.

Deliverable description:	FY:2014	FY:2015	FY:2016	FY:	FY:
Degree Compass	\$358,885.67	\$263,885.67	\$263,885.67		

Proposed savings to be realized per fiscal year by entering into this contract. If amendment to an existing contract, please indicate the proposed savings to be realized by the amendment. Add rows as necessary to define all potential savings per deliverable.

Deliverable description:	FY:	FY:	FY:	FY:	FY:

Comparison of cost per fiscal year of obtaining this service through the proposed contract or amendment vs. other options. List other options available (including other vendors), cost of other options, and source of information for comparison of other options (e.g. catalog, Web site). Add rows as necessary to indicate price differentials between contract deliverables.

Proposed Vendor Cost: (name of vendor)	FY:	FY:	FY:	FY:	FY:
Other Vendor Cost: (name of vendor)	FY:	FY:	FY:	FY:	FY:
Other Vendor Cost: (name of vendor)	FY:	FY:	FY:	FY:	FY:

Desire2Learn Expenditures

<u>Year</u>	<u>Original</u>	<u>Work Orders</u>	<u>Sub-Total</u>	<u>Degree Compass Amendment</u>	
2012	\$ 2,265,250	\$ 4,500	\$ 2,269,750		\$ 2,269,750
2013	\$ 2,295,569	\$ 38,750	\$ 2,334,319		\$ 2,334,319
2014	\$ 2,326,888	\$ 15,000	\$ 2,341,888	\$ 358,886	\$ 2,700,774
2015	\$ 2,359,241	\$ 15,000	\$ 2,374,241	\$ 263,886	\$ 2,638,127
2016	\$ 2,392,661	\$ 15,000	\$ 2,407,661	\$ 263,886	\$ 2,671,547
	\$ 11,639,609	\$ 88,250	\$ 11,727,859	\$ 886,658	\$ 12,614,517

REQUEST: NON-COMPETITIVE AMENDMENT

APPROVED

Commissioner of Finance & Administration
Date:

EACH REQUEST ITEM BELOW MUST BE DETAILED OR ADDRESSED AS REQUIRED.

1) RFS #	NA	
2) State Agency Name :	Tennessee Board of Regents	
EXISTING CONTRACT INFORMATION		
3) Service Caption :	Software license which enables students to evaluate their aptitude for potential courses and majors with the goal of increasing student retention and graduation rates.	
4) Contractor :	Desire2Learn, Incorporated	
5) Contract #	TBR Contract No. 102279	
6) Contract Start Date :	January 1, 2014	
7) <u>Current</u> Contract End Date IF <u>all</u> Options to Extend the Contract are Exercised :	December 31, 2016	
8) <u>Current</u> Total Maximum Cost IF <u>all</u> Options to Extend the Contract are Exercised :	\$11,727,859	
PROPOSED AMENDMENT INFORMATION		
9) <u>Proposed</u> Amendment #	3	
10) <u>Proposed</u> Amendment Effective Date : (attached explanation required if date is < 60 days after F&A receipt)	Upon Approval	
11) <u>Proposed</u> Contract End Date IF <u>all</u> Options to Extend the Contract are Exercised :	December 31, 2016	
12) <u>Proposed</u> Total Maximum Cost IF <u>all</u> Options to Extend the Contract are Exercised :	\$12,614,517 (increase of \$886,658)	
13) Approval Criteria : (select one)	<input type="checkbox"/> use of Non-Competitive Negotiation is in the best interest of the state	
	<input type="checkbox"/> only one uniquely qualified service provider able to provide the service	
14) Description of the Proposed Amendment Effects & Any Additional Service :		
<p>A software system which is a predictive/analytic tool that provides students with a projection on how they will perform in a certain class based on their past record and the performance records of other students who have taken the course who have an academic record similar to the student. The product also provides students with a prediction as to how they will perform in the core classes for a particular major.</p>		

15) Explanation of Need for the Proposed Amendment :

Pursuant to the Complete The Tennessee Board of Regents and its constituent institutions are continually seeking new and better methods and tools that will improve student retention and completion rates. In furtherance of this goal, various schools in the Board of Regents system are experimenting with new methods of retaining students.

One such retention and completion tool that has been developed by Austin Peay State University through funding provided by the Gates Foundation, is a software system which provides a prediction to students as to how they will perform in a certain class based on their past record and the performance records of other students who have taken the course who have an academic record similar to the student. Studies have shown that this tool has been shown to be accurate 90% of the time. The product also provides students with a prediction as to how they will perform in the core classes for a particular major. The result is that it has aided both retention and completion at those schools who have implemented the system. Copies of reports on the outcomes of the use of Degree Compass provided to the Tennessee Higher Education Coordinating Commission are attached.

16) Name & Address of Contractor's Current Principal Owner(s) :
(not required if proposed contractor is a state education institution)

John Baker, Desire2Learn, Inc. 151Charles Street West, Suite 400, Kitchner, ON N2G 1H6.
New Enterprise Associates 14/NEA Ventures 2012 1954 Greenspring Drive, Suite 600, Timonium, MD 21093
OMERS Ventures LP 200 Bay Street, Suite 1410 South Tower, PO Box 85, Toronto, ON

17) Documentation of Office for Information Resources Endorsement :
(required only if the subject service involves information technology)

select one: Documentation Not Applicable to this Request Documentation Attached to this Request

18) Documentation of Department of Personnel Endorsement :
(required only if the subject service involves training for state employees)

select one: Documentation Not Applicable to this Request Documentation Attached to this Request

19) Documentation of State Architect Endorsement :
(required only if the subject service involves construction or real property related services)

select one: Documentation Not Applicable to this Request Documentation Attached to this Request

20) Description of Procuring Agency Efforts to Identify Reasonable, Competitive, Procurement Alternatives :

There are no other vendors that supply a product such as this. Consequently, TBR would not be able to identify alternative procurement opportunities.

21) Justification for the Proposed Non-Competitive Amendment :

- This product is available from only one source and not merchandised through wholesalers, jobbers, and retailers. Austin Peay has entered into a marketing agreement with Desire2Learn whereby Desire2Learn obtained the exclusive right to commercialize the product throughout the world and Austin Peay receives a royalty on the basis of licenses granted. As a part of that licensing agreement, the TBR schools were granted a 20% discount if they licensed the product. Further negotiations with Desire2Learn has extended that discount by an additional 8%.
- This product is unique and easily established as one of a kind.
- This product is compatible with the in-place on-line learning management system, Desire2Learn.

REQUESTING AGENCY HEAD SIGNATURE & DATE :

(must be signed & dated by the ACTUAL procuring agency head as detailed on the Signature Certification on file with OCR— signature by an authorized signatory will be accepted only in documented exigent circumstances)

Agency Head Signature

Date

CONTRACT SUMMARY SHEET

021406

RFS #		Contract #			
State Agency		State Agency Division			
Tennessee Board of Regents					
Contractor Name		Contractor ID # (FEIN or SSN)			
Desire2Learn, Incorporated		<input type="checkbox"/> C- or <input type="checkbox"/> V-			
Service Description					
Software license which enables students to evaluate their aptitude for potential courses and majors					
Contract BEGIN Date		Contract END Date		Subrecipient or Vendor?	
1/1/2014		12/31/2016			
Mark Each TRUE Statement					
<input type="checkbox"/> Contractor is on STARS			<input type="checkbox"/> Contractor's Form W-9 is on file in Accounts		
Allotment Code	Cost Center	Object Code	Fund	Funding Grant Code	Funding Subgrant Code
FY	State	Federal	Interdepartmental	Other	TOTAL Contract Amount
2012					\$ 2,269,750.00
2013					\$ 2,334,319.00
2014					\$ 2,341,888.00
2015					\$ 2,374,241.00
2016					\$ 2,407,661.00
					\$ -
TOTAL:	\$ -	\$ -	\$ -	\$ -	\$ 11,727,859.00
— COMPLETE FOR AMENDMENTS ONLY —			State Agency Fiscal Contact & Telephone #		
FY	Base Contract & Prior Amendments	THIS Amendment ONLY	Dale Sims (615) 366-3921		
2014		\$ 358,885.67	State Agency Budget Officer Approval		
2015		\$ 263,885.67			
2016		\$ 263,885.67			
			Funding Certification (certification, required by T.C.A., § 9-4-5113, that there is a balance in the appropriation from which the obligated expenditure is required to be paid that is not otherwise encumbered to pay obligations previously incurred)		
TOTAL:	\$ -	\$ 886,657.01			
End Date					
Contractor Ownership (complete only for base contracts with contract # prefix: FA or GR)					
<input type="checkbox"/> African American	<input type="checkbox"/> Person w/ Disability	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Small Business	<input type="checkbox"/> NOT disadvantaged	
<input type="checkbox"/> Asian	<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> OTHER minority/disadvantaged—		
Contractor Selection Method (complete for ALL base contracts— N/A to amendments or delegated authorities)					
<input type="checkbox"/> RFP	<input type="checkbox"/> Competitive Negotiation	<input type="checkbox"/> Alternative Competitive Method			
<input type="checkbox"/> Non-Competitive Negotiation	<input type="checkbox"/> Negotiation w/ Government(eg.ID,GG,GU)	<input type="checkbox"/> Other			
Procurement Process Summary (complete for Alternative Method, Competitive Negotiation, Non-Competitive Negotiation, OR Other)					

AMENDMENT No. 2 to the CONTRACT BETWEEN DESIRE2LEARN INCORPORATED AND TENNESSEE BOARD OF REGENTS

This Amendment No. 2 to the Contract effective January 1, 2012 ("Contract") is entered into on January 1, 2014 (the "Effective Date") by and between **DESIRE2LEARN INCORPORATED ("D2L")**, and **TENNESSEE BOARD OF REGENTS ("TBR")**.

WITNESSETH

WHEREAS, D2L and TBR desire to enter into this Amendment No. 2 in order to make certain changes to the Contract, as set forth below.

NOW THEREFORE, in consideration of the foregoing and mutual covenants contained in this Amendment No. 2 the parties agree as follows:

A. 1. Term. Section B of the original Agreement is modified to read as follows:

B.1. Term. This Contract shall be effective for the period commencing on January 1, 2014 to December 31, 2014. TBR shall have no obligation for services rendered by the Contractor which are not performed within the specified period.

B. The following shall be added as new Section E.19 to the Contract and a new Attachment III shall be added:

E.19. Prohibition on Hiring Illegal Immigrants. Tennessee Public Chapter No. 878 of 2006, TCA 12-4-124, requires that Contactor attest in writing that Contractor will not knowingly utilize the services of illegal immigrants in the performance of this Contract and will not knowingly utilize the services of any subcontractor, if permitted under this Contract, who will utilize the services of illegal immigrants in the performance of this Contract. The attestation shall be made on the form, Attestation re Personnel Used in Contract Performance ("the Attestation"), which is attached and hereby incorporated by this reference as Attachment III.

If Contractor is discovered to have breached the Attestation, the Commissioner of Finance and Administration shall declare that the Contractor shall be prohibited from contracting or submitting a bid to any Tennessee Board of Regents institution or any other state entity for a period of one (1) year from the date of discovery of the breach. Contractor may appeal the one (1) year by utilizing an appeals process in the Rules of Finance and Administration, Chapter 0620.

C. The following shall be added to the Contract as "Attachment IV":

1. D2L grants to TBR (or its colleges and universities, as applicable) a non-exclusive, non-transferable, time-limited (revoked upon termination), object-code license for use of the Degree Compass software ("Software") upon the purchase by TBR of the relevant licenses.
2. This license shall be coterminous with the term set out in the Contract.
3. TBR shall arrange for the ordering and payment of all Software set out in this Attachment IV on behalf of its colleges and universities.
4. TBR (or its colleges and universities, as applicable) shall be responsible for acquiring and installing computer hardware and necessary third party software licenses prior to the installation.
5. Within 90 days following Delivery ("Warranty Period") TBR shall establish to its reasonable satisfaction that the Software operates as warranted. TBR shall notify D2L of material defects as soon as practicable during the Warranty Period ("Defect Notice"). Upon receipt, D2L will use reasonable efforts to correct the reported defects and provide TBR with an updated version of Software or workaround within 45 days. TBR's Warranty Period shall extend another 30 days from receipt of the updated Software ("Extended Warranty"). During the Warranty Period or Extended Warranty Period, if D2L is unable to cure material defects, and the defects materially impair TBR's use of the Software, TBR may return the Software for a prorated refund of the license fee paid, provided it certifies that it has not retained any copies of the Software or documentation. If TBR does not notify D2L of a Defect Notice, or the Defect Notice does not disclose any defects, the Warranty Period shall not be extended.
6. Each TBR college and university may use or access Software for its use only. No third party, other educational institution or business group or entity may make use of, or obtain access to, Software without a separate license for Software.

7. TBR shall maintain records of the number and location of all copies of Software, and shall advise D2L upon request, of the location of each copy. D2L may visit TBR's and its colleges' and universities' site no more than once a year to ensure compliance with the terms of this Contract. At D2L's expense, D2L may retain a professional independent third party to audit compliance with this Contract at TBR's or its colleges' and universities' premises during normal business hours, upon satisfactory arrangements with TBR, including execution by the auditor of a confidentiality agreement. If the visit or audit reveals that use of Software exceeds its permitted use, TBR shall promptly pay D2L's then-current fees.
8. Software may contain functionalities that collect, analyze and interpret TBR data elements. Use of such functionalities is entirely dependent on the accuracy and quality of the TBR data elements. D2L shall not be responsible in any way for the use of or reliance on such functionalities by TBR or its end users.
9. Notwithstanding anything to the contrary in the Contract, the prices in this Attachment IV shall not be subject to increase until after December 31, 2016.
10. Pricing for the Software shall be as follows:

Degree Compass			
Annual License Fees (per User)	Implementation Fee for each TBR College or University	Annual Support Fees	
Per FTE:	\$1.80	\$5,000 (per Banner installation)	15% of total annual license fees

- C. **Entire Agreement.** The Contract, as amended by this Amendment No. 2, is the entire agreement between the parties. All other terms and conditions of the Contract that have not been expressly amended by this Amendment No. 2 shall remain the same.

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be signed by their respective officers thereunto duly authorized, all as of the Effective Date.

DESIRE2LEARN INCORPORATED

TENNESSEE BOARD OF REGENTS

By: _____

By: _____

Name:
Title:
Date:

Name:
Title:
Date:

ATTACHMENT III

ATTESTATION RE PERSONNEL USED IN CONTRACT PERFORMANCE

CONTRACT NUMBER:	
CONTRACTOR LEGAL ENTITY NAME:	
FEDERAL EMPLOYER IDENTIFICATION NUMBER: (or Social Security Number)	

The Contractor, identified above, does hereby attest, certify, warrant, and assure that the Contractor shall not knowingly utilize the services of an illegal immigrant in the performance of this Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant in the performance of this Contract.

**SIGNATURE &
DATE:**

NOTICE: This attestation MUST be signed by an individual empowered to contractually bind the Contractor. If said individual is not the chief executive or president, this document shall attach evidence showing the individual's authority to contractually bind the Contractor.

**RENEWAL AGREEMENT
BETWEEN
DESIRE2LEARN INCORPORATED
AND
TENNESSEE BOARD OF REGENTS**

WHEREAS, DESIRE2LEARN (Contractor), and the Tennessee Board of Regents (Board), entered into an Agreement in January 2012, in which the Contractor agreed generally to provide technology enhanced course management products and services to the institutions of the Tennessee Board of Regents, and

WHEREAS, the said parties desire to extend said Agreement in the manner described below.

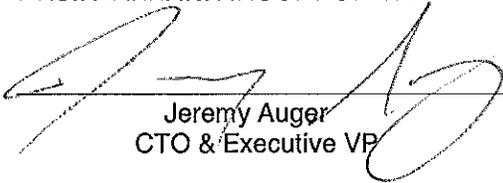
NOW THEREFORE, the said parties hereby incorporate by reference all the terms and provisions of that said Agreement and supplement said Agreement with the following provisions:

Section B of the original Agreement is modified to read as follows:

- B.1. Term. This contract shall be effective for the period commencing on January 1, 2013 to December 31, 2013. TBR shall have no obligation for services rendered by the Contractor which are not performed within the specified period.

IN WITNESS WHEREOF, the parties have by their duly authorized representative set their signatures.

DESIRE2LEARN INCORPORATED



Jeremy Auger
CTO & Executive VP



DATE: 10/29/12

TENNESSEE BOARD OF REGENTS



John G. Morgan, Chancellor *Dale Swi*

DATE: 11/15/12



GENERAL ASSEMBLY OF THE STATE OF TENNESSEE
FISCAL REVIEW COMMITTEE

320 Sixth Avenue, North – 8th Floor
NASHVILLE, TENNESSEE 37243-0057
615-741-2564

Sen. Bill Ketron, Chairman
Senators

Douglas Henry Reginald Tate
Brian Kelsey Ken Yager
Eric Stewart
Randy McNally, *ex officio*
Lt. Governor Ron Ramsey, *ex officio*

Rep. Curtis Johnson, Vice-Chairman
Representatives

Tommie Brown David Shepard
Jim Coley Tony Shipley
Charles Curtiss Curry Todd
Johnny Shaw Mark White
Charles Sargent, *ex officio*
Speaker Beth Harwell, *ex officio*

MEMORANDUM

TO: The Honorable John Morgan, Chancellor
 Tennessee Board of Regents

FROM: Senator Bill Ketron, Chairman *BK*
 Representative Curtis Johnson, Vice-Chairman *CJ*

DATE: November 16, 2011

SUBJECT: **Contract Comments**
 (Fiscal Review Committee Meeting 11/15/11)

RFS# NA (Edison # NA)
Department: Tennessee Board of Regents
Vendor: Desire2Learn

Summary: The proposed one-year contract is for an on-line course management system and hosting services for the Regents Online Campus Collaborative. It has a term beginning January 1, 2012, and ending December 31, 2012, with the option to extend in one-year increments for a total of five years.

Proposed maximum liability: \$2,265,250

After review, the Fiscal Review Committee voted to recommend approval of the contract.

cc: The Honorable Dale Sims, Vice-Chancellor
 Ms. Jessica Robertson, Chief Procurement Officer
 Ms. Angela Gregory Flynn, Director of Purchasing and Contracts



Tennessee Board of Regents

1415 Murfreesboro Road – Suite 346 – Nashville, Tennessee 37217-2
Telephone (615) 366-4436 FAX (615) 366-2243

October 28, 2011

Ms. Leni S. Chick
Fiscal Analyst
Rachel Jackson Building, 8th Floor
Nashville, TN 37243

Dear Ms. Chick:

Enclosed please find an Agreement between Tennessee Board of Regents and Desire2Learn, Inc. providing for an on-line course management system and hosting services. Please note that this is a non-competitive Agreement to a previously competitive RFP process in which Desire2Learn, Inc. was the successful proposer and awarded the contract.

Per Fiscal Review's request to see non-competitive agreements/amendments, this contract must be approved by the Committee. Please contact me regarding the date this will go before the Fiscal Review Committee and I will inform the representatives to insure they are present for the meeting in which the contract will be discussed. If you have any questions, please do not hesitate to contact me at 366-4436.

Information regarding the contract may be sent to my attention at the Tennessee Board of Regents, 1415 Murfreesboro Pike, Suite 346, Nashville, Tennessee 37217.

Sincerely,

Angela Gregory Flynn
Director of Purchasing and Contracts

cc: John Morgan
Dale Sims
Raylean Henry
Lou Svendsen

Austin Peay State University – East Tennessee State University – Middle Tennessee State University – Tennessee State University
Tennessee Tech University – University of Memphis – Chattanooga State Community College – Cleveland State Community College
Columbia State Community College – Dyersburg State Community College – Jackson State Community College
Motlow State Community College – Nashville State Community College - Northeast State Community College
Pellissippi State Community College - Roane State Community College – Southwest Tennessee Community
Volunteer State Community College - Walters State Community College – The Tennessee Technology Centers

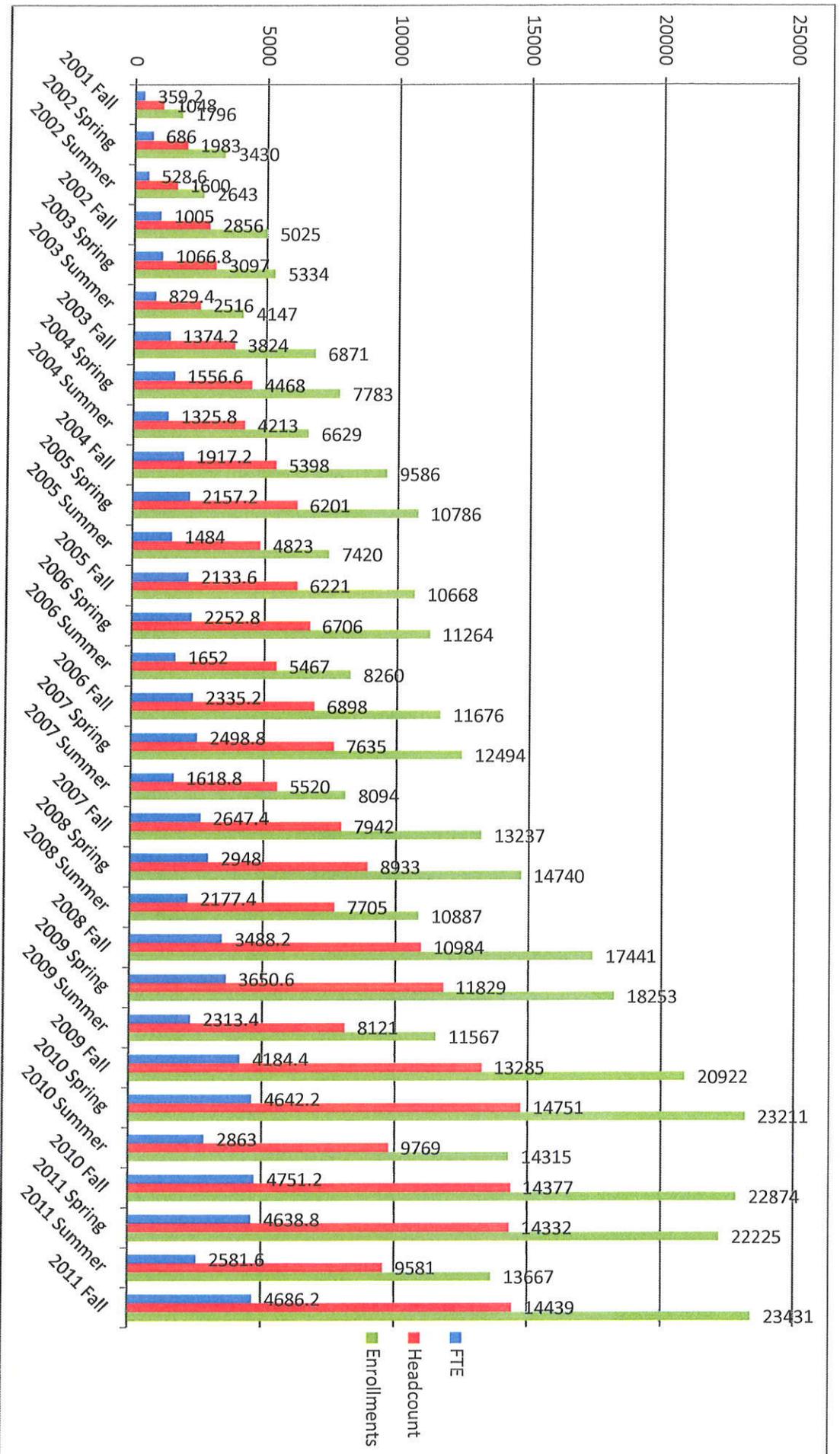
Summary of Effects of TBR Changing Course Management Systems (CMS)

A course management system (CMS) is an advanced computer program which utilizes the latest web, data management, multimedia and other technologies to present instructional materials across the internet. The CMS is the central piece of software in modern course instruction and is tied to every student, faculty member, educational administrator, accreditation officer, and compliance professional at each and every institution across the state. Following a 2007 Request for Proposal (RFP), the 46 institutions of the Tennessee Board of Regents moved their electronic course content to a single course management system written and supported by Desire2Learn. The current agreement expires on December 31, 2011.

As the System approached the expiration of the current CMS contract, the option of whether to pursue a non-competitive contract or issue a RFP for a course management system was examined. In considering a potential change to a new CMS, the System concluded a change would present the following challenges and potential risks and effects:

- **Students.**
 - Must learn how to access, navigate, and utilize a new course management system.
 - Diminishes the time students can focus on course content as opposed to learning a new educational process and software.
- **Faculty.**
 - Must learn how to access, navigate, and utilize a new course management system.
 - Must migrate data and course content to a new CMS. This effort comes at the expense of devoting time to the improvement of current electronic courses and the creation of new offerings.
 - Estimate that conversion to a new CMS would range from 10 to 100 hours for each course (depending upon course complexity, depth of materials, and the proficiency of the individual faculty member).
- **Administrative / IT Staff.**
 - Developing training materials and conducting training for nearly 7,000 faculty, computer system administrators, training departments, and support personnel
 - Teaching more than 50,000 TBR students across the state how to access, navigate, and utilize the new course management system
 - Developing software to integrate data from all other computer systems across the state into the new course management system
 - Creating new business processes, data permission levels, and other computer access roles to adapt business practices to a new course management system
 - Evaluating the functionality of more than 8,000 courses to ensure they operate acceptably in the new system

Regents Online Campus Collaborative Growth



FTE = Full time equivalency

Headcount = the number of distinct individuals enrolled in the program

Enrollments = the number of class spaces enrolled in by students (1 student taking 4 classes = 4 enrollments)

Institution D2L Statistics (Based on Fall 2011 Data)				
	Course offerings	Headcount	Course templates	Estimated Number of Instructors
APSU	33,057	10,492	7,381	621
ETSU	58,630	15,185	20,595	1,449
MTSU	88,397	24,437	8,862	1,164
TSU	21,752	5,264	4,143	222
TTU	17,881	9,763	4,621	423
UOM	100,632	19,264	20,559	1,079
University Total:	320,349	84,405	66,161	4,958
CSTCC	19,271	10,860	7,358	319
CLSCC	5,863	3,142	974	149
CSCC	3,070	4,125	1,702	157
DSCC	6,192	3,095	1,529	128
JSCC	10,095	4,606	2,157	225
MSCC	8,666	3,684	1,023	151
NSCC	18,559	8,757	2,193	457
NSTCC	16,218	6,318	1,006	346
PSCC	21,450	10,424	3,805	536
RSCC	8,190	6,048	2,381	321
STCC	21,377	8,197	5,204	345
VSCC	16,970	7,591	1,914	339
WSCC	14,614	6,876	5,004	347
Community College Total:	170,535	83,723	36,250	3,820
ROCC	16,680	14,439	2,530	669
Overall Total:	507,564	182,567	104,941	9,447

Course offerings = number of sections of courses

Headcount = number of distinct students in the system

Course templates = number of master course templates created

Estimated # of instructors = not all institutions identify instructors the same way in the system. They can have multiple roles. Therefore only an estimate can be provided, which is likely to be low.

Supplemental Documentation Required for
Fiscal Review Committee

*Contact Name:	Raylean Henry	*Contact Phone:	615-366-3917		
*Contract Number:	100240	*RFS Number:			
*Original Contract Begin Date:	12/31/2006	*Current End Date:	12/31/2011		
Current Request Amendment Number: <i>(if applicable)</i>	100240-6				
Proposed Amendment Effective Date: <i>(if applicable)</i>	1/1/2012				
*Department Submitting:	Tennessee Board of Regents				
*Division:	Regents Online Campus Collaborative				
*Date Submitted:	10/28/11				
*Submitted Within Sixty (60) days:	Yes				
<i>If not, explain:</i>	Given the budget situation, we required time to negotiate with the vendor for their services.				
*Contract Vendor Name:	Desire2Learn (D2L)				
*Current Maximum Liability:	\$10,215,926				
*Current Contract Allocation by Fiscal Year: (as Shown on Most Current Fully Executed Contract Summary Sheet)					
FY: 2007	FY: 2008	FY: 2009	FY: 2010	FY: 2011	FY
\$ 2,486,500	\$1,980,900	\$ 1,880,116	\$ 1,915,701	\$ 1,952,709	\$
*Current Total Expenditures by Fiscal Year of Contract: (attach backup documentation from STARS or FDAS report)					
FY: 2007	FY: 2008	FY: 2009	FY: 2010	FY: 2011	FY
\$2,486,500	\$2,234,400	\$2,231,696	\$2,303,291	\$2,313,209	\$
IF Contract Allocation has been greater than Contract Expenditures, please give the reasons and explain where surplus funds were spent:		N/A			
IF surplus funds have been carried forward, please give the reasons and provide the authority for the carry forward provision:		N/A			
IF Contract Expenditures exceeded Contract Allocation, please give the reasons and explain how funding was acquired to pay the overage:		N/A			
*Contract Funding Source/Amount:	State:		Federal:		

Supplemental Documentation Required for
Fiscal Review Committee

Interdepartmental:		<i>Other:</i>	\$10,215,926
If "other" please define:			
Dates of All Previous Amendments or Revisions: <i>(if applicable)</i>		Brief Description of Actions in Previous Amendments or Revisions: <i>(if applicable)</i>	
Method of Original Award: <i>(if applicable)</i>		Competitive RFP process	
Include a detailed breakdown of the actual expenditures anticipated in each year of the contract. Include specific line items, source of funding, and disposition of any excess fund. <i>(if applicable)</i>		See Attachment 1, Exhibit 1 of the Contract for specific expenditures related to this Contract.	
Include a detailed breakdown, in dollars, of any savings that the department anticipates will result from this contract. Include, at a minimum, reduction in positions, reduction in equipment costs, reduction in travel. <i>(if applicable)</i>		Approximately \$514,630	
Include a detailed analysis, in dollars, of the cost of obtaining this service through the proposed contract as compared to other options. <i>(if applicable)</i>		To convert to another provider it would take approximately 37,593 man hours, with an estimated cost of \$1,424,640.00.	

REQUEST: NON-COMPETITIVE CONTRACT

APPROVED

Commissioner of Finance & Administration

Date:

Each of the request items below indicates specific information that **must** be individually detailed or addressed **as required**. A request can not be considered if information provided is incomplete, non-responsive, or does not clearly address each of the requirements individually as required.

1) RFS #		
2) State Agency Name :	Tennessee Board of Regents	
3) Service Caption :	Agreement for Desire2Learn online course management system	
4) Proposed Contractor :	Desire2Learn (D2L)	
5) Contract Start Date : (attached explanation required if date is < 60 days after F&A receipt)	January 1, 2012	
6) Contract End Date IF <u>all</u> Options to Extend the Contract are Exercised :	December 31, 2016	
7) Total Maximum Cost IF <u>all</u> Options to Extend the Contract are Exercised :	\$11,639,609.00	
8) Approval Criteria : (select one)	<input checked="" type="checkbox"/>	use of Non-Competitive Negotiation is in the best interest of the state
	<input type="checkbox"/>	only one uniquely qualified service provider able to provide the service
9) Description of Service to be Acquired :	Course management system and central hosting for all online courses offered by all 46 TBR institutions.	
10) Explanation of the Need for or Requirement Placed on the Procuring Agency to Acquire the Service :	All TBR institutions provide online courses (fully online or hybrid) for over 200,000 students across TN. D2L has provided the CMS and hosting of all online courses since 2006. Over the past 4 years, D2L has worked with TBR to provide additional functions, procedures, support that is unique to TBR. These enhancements have improved the service to the student, faculty and administrators and allowed online education to grow at a pace of 20% per semester since 2008.	
11) Explanation of Whether the Procuring Agency Bought the Service in the Past, & if so, What Procurement Method It Used :	The initial contract with D2L was established in 2006 via a competitive RFP process.	
12) Name & Address of the Proposed Contractor's Principal Owner(s) : (<u>not</u> required if proposed contractor is a state education institution)	Desire2Learn, 151 Charles Street W, Suite 400, Kitchener, Ontario, Canada N2G 1B9	
13) Evidence of the Proposed Contractor's Experience and Length of Experience Providing the Service :	Desire2Learn (D2L) has been providing eLearning solutions through their course management system to educational environments	

since 1999.

14) Documentation of Office for Information Resources Endorsement :
(required only if the subject service involves information technology)

select one:

Documentation Not Applicable to this Request

Documentation Attached to this Request

15) Documentation of Department of Personnel Endorsement :
(required only if the subject service involves training for state employees)

select one:

Documentation Not Applicable to this Request

Documentation Attached to this Request

16) Documentation of State Architect Endorsement :
(required only if the subject service involves construction or real property related services)

select one:

Documentation Not Applicable to this Request

Documentation Attached to this Request

17) Description of Procuring Agency Efforts to Identify Reasonable, Competitive, Procurement Alternatives :

If a new CMS were deployed, it would require over 37,000 personnel hours and \$1,400,000 in estimated cost to ensure we continue the same level of quality service in the education of Tennesseans. This would require a moratorium of any new programs, degrees, and course offerings for at least one year. This would significantly impact the growth of the online programs at every TBR institution. Therefore, we feel that it is in the best interest of the state to continue with this provider.

18) Justification of Why the State Should Use Non-Competitive Negotiation Rather Than a Competitive Process :
(Being the "only known" or "best" service provider to perform the service as desired will not be deemed adequate justification.)

1. TBR has spent over 1 million dollars in upgrades, enhancements and special customizations with D2L that have benefited all TBR institutions and the ROCC (Regents Online Campus Collaborative) Program that affects all 46 institutions.
2. The TBR system would be required to provide training to over 1,000 current online instructors for the ROCC Program if a new CMS was deployed. The estimated time for this training would be over 7000 hours and about \$200,000. This training is ongoing with D2L and has been refined to ensure quality training for new and experienced online instructors using D2L.
3. Each institution would be required to convert existing online courses into a new CMS. RODP alone would have to convert over 300 individual courses. This course migration would require at least one year and over \$300,000. All new course and program proposal would need to be placed on hold for that year and growth in the online across TBR would not increase.
4. Integration of Banner and RODP SIS system and integration with another CMS would require more than 300 man hours and an investment of more than \$8,000. Due to the nature of ROCC, the collaboration requires student enrollment data to be securely transferred by the 46 TBR institutions to ROCC (TBR) and to D2L. D2L has worked with ROCC to develop customized process to ensure the data is accurate and timely.
5. D2L has worked with TBR and ROCC to create special customization that have streamlined registration, grade posting and transfer, backup systems to house all TRB databases and course information.

REQUESTING AGENCY HEAD SIGNATURE & DATE :

(must be signed & dated by the ACTUAL procuring agency head as detailed on the Signature Certification on file with OCR— signature by an authorized signatory will be accepted only in documented exigent circumstances)

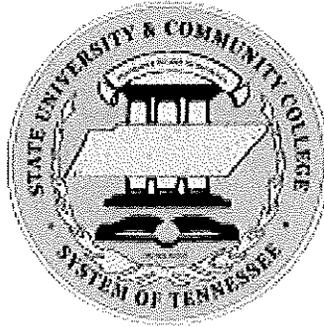
Agency Head Signature

Date

CONTRACT SUMMARY SHEET

021406

RFS #		Contract #			
		TBR Contract 100240-6			
State Agency		State Agency Division			
Tennessee Board of Regents					
Contractor Name		Contractor ID # (FEIN or SSN)			
Desire2Learn, Inc. (D2L)		<input type="checkbox"/> C- or <input type="checkbox"/> V-			
Service Description					
On-line course management system and hosting					
Contract BEGIN Date		Contract END Date		Subrecipient or Vendor?	
1/1/2012		12/31/2016			
Mark Each TRUE Statement					
<input type="checkbox"/> Contractor is on STARS			<input type="checkbox"/> Contractor's Form W-9 is on file in Accounts		
Allotment Code	Cost Center	Object Code	Fund	Funding Grant Code	Funding Subgrant Code
FY	State	Federal	Interdepartmental	Other	TOTAL Contract Amount
2007				\$ 2,486,600.00	\$ 2,486,600.00
2008				\$ 2,234,400.00	\$ 2,234,400.00
2009				\$ 2,251,696.00	\$ 2,251,696.00
2010				\$ 2,303,291.00	\$ 2,303,291.00
2011				\$ 2,313,209.00	\$ 2,313,209.00
					\$ -
TOTAL:		\$ -	\$ -	\$ 11,589,196.00	\$ 11,589,196.00
— COMPLETE FOR AMENDMENTS ONLY —			State Agency Fiscal Contact & Telephone #		
FY	Base Contract & Prior Amendments	THIS Amendment ONLY			
2012		\$ 2,265,250.00	State Agency Budget Officer Approval		
2013		\$ 2,295,569.00			
2014		\$ 2,326,888.00			
2015		\$ 2,359,241.00			
2016		\$ 2,392,661.00			
TOTAL:	\$ -	\$ 11,639,609.00	Funding Certification (certification, required by T.C.A., § 9-4-5113, that there is a balance in the appropriation from which the obligated expenditure is required to be paid that is not otherwise encumbered to pay obligations previously incurred)		
End Date					
Contractor Ownership (complete only for base contracts with contract # prefix: FA or GR)					
<input type="checkbox"/> African American	<input type="checkbox"/> Person w/ Disability	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Small Business	<input checked="" type="checkbox"/> NOT disadvantaged	
<input type="checkbox"/> Asian	<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> OTHER minority/disadvantaged—		
Contractor Selection Method (complete for ALL base contracts— N/A to amendments or delegated authorities)					
<input type="checkbox"/> RFP	<input type="checkbox"/> Competitive Negotiation	<input type="checkbox"/> Alternative Competitive Method			
<input checked="" type="checkbox"/> Non-Competitive Negotiation	<input type="checkbox"/> Negotiation w/ Government(eg, ID, GG, GU)	<input type="checkbox"/> Other			
Procurement Process Summary (complete for Alternative Method, Competitive Negotiation, Non-Competitive Negotiation, OR Other)					



Contract

Between

**Tennessee Board of Regents
and
Desire2Learn Incorporated**

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Contract

Attachment I – List of Products & Services

Exhibit I – Contract Rates

Attachment II – Performance Metrics

**CONTRACT
BETWEEN
TENNESSEE BOARD OF REGENTS
AND
DESIRE2LEARN INCORPORATED**

This Contract, by and between the Tennessee Board of Regents, for itself and its member institutions, hereinafter referred to as the "Institution" or "TBR" and Desire2Learn Incorporated, hereinafter referred to as "D2L" or the "Contractor" is for the provision of technology enhanced course management products ("System") and services, as further defined in the "SCOPE OF SERVICES."

The Contractor is a private, for profit, corporation organized under the laws of Ontario, Canada.

The Contractor's address is:

151 Charles Street West, Suite 400
Kitchener, Ontario
Canada N2G 1H6

A. SCOPE OF SERVICES:

- A.1 The scope of products and services is attached as Attachment I and hereby incorporated by reference. The course management system ("System") shall include all products and services provided by Contractor under this Contract.
- A.2 The System must support compliance with the web content accessibility guidelines (WCAG), developed pursuant to W3C and ADA standards and all hosting and other services must be performed pursuant to the rules promulgated by the U.S. Family Educational Rights and Privacy Act (FERPA).

B. CONTRACT TERM:

- B.1. Contract Term. This Contract shall be effective for the period commencing on January 1, 2012 and ending on December 31, 2012 (the "first" or "initial" term). The Institution shall have no obligation for services rendered by the Contractor which are not performed within the specified period.

This Contract is subject to the appropriation and availability of State and/or federal funds. In the event that funds are not appropriated or are otherwise unavailable in the initial term and for any additional term, Institution reserves the right to terminate this Contract upon written notice to the Contractor. Such termination shall not be deemed a breach of Contract by the Institution. Upon receipt of the written notice, the Contractor shall cease all work associated with the Contract. Should such an event occur, the Contractor shall be entitled to compensation for all satisfactory and authorized products received or services performed as of the termination date. Upon such termination, the Contractor shall have no right to recover from the Institution any actual, general, special, incidental, consequential, or any other damages whatsoever of any description or amount.

- B.2. Term Extension. The Institution reserves the right to extend this Contract for an additional period or periods of time for a total of five contract terms, not to exceed a total term of sixty (60) months. An extension of the term of this Contract will be effected through an amendment to the Contract. If the extension of the Contract necessitates additional funding beyond that which was included in the original Contract, the increase in the Institution's maximum liability

will also be effected through an amendment to the Contract and shall be based upon rates provided for in the original Contract. In addition to the rights provided below in Section D. 5, at the time of any renewal TBR shall have the right to discontinue any software license and services, including hosting services provided under this Contract, with or without cause.

- B.3 In the event that Institution shall elect to discontinue hosting services in any future term, Contractor shall cooperate with and provide consulting services to Institution to accomplish the a smooth transition of such services. Charges for such consulting shall be those set forth in Exhibit I to Attachment 1.

C. PAYMENT TERMS AND CONDITIONS:

- C.1 Maximum Liability. (a) In no event shall the maximum cost to the Institution for the first term under this Contract exceed \$2,265,250.00. The fees specified in Exhibit I to Attachment I and hereby incorporated by reference shall constitute the entire compensation due the Contractor for the Products and Services and all of the Contractor's obligations hereunder regardless of the difficulty, materials or equipment required. The fees include, but are not limited to, all applicable taxes (other than Contractor's business/income taxes for which the TBR has no liability), fees, overheads, and all other direct and indirect costs incurred or to be incurred by the Contractor.

(b) The Contractor is not entitled to be paid for work not requested by the Institution. The maximum liability represents available funds for payment to the Contractor and does not guarantee payment of any such funds to the Contractor under this Contract unless the Institution requests work and the Contractor performs the work; in which case, the Contractor shall be paid in accordance with the fees set out in Exhibit I to Attachment 1.

(c) Exhibit I also provides the Contractor's costs for additional goods/services which may be purchased by TBR at the rates/costs provided. Any purchase based on these additional goods/services after the effective date of this Contract shall not be included in the maximum cost figure given in this Section C.1; provided, however, copies of any orders placed shall be attached to this Contract and become a part hereof.

- C.2 Compensation Firm. The fees specified in Exhibit I are firm for the duration of the Contract, including any extensions/renewals and are not subject to additional escalation for any reason unless the Contract is amended.

- C.3 Payment. The Contractor's compensation shall be contingent upon satisfactory delivery of any products or services contracted for in Exhibit 1 to Attachment 1.

- C.4 Payment Methodology. Exhibit I of Attachment I of this Contract details the amounts to be paid and the schedule of payment. TBR will issue payment after receipt of an invoice in form and substance acceptable to TBR with all of the necessary supporting documentation. All invoices for goods/services will be addressed to the TBR Contract Monitor. Except as otherwise provided herein, D2L shall submit invoices for any consulting or similar services provided under this Contract within thirty (30) days after the service is completed. Payments under this Contract shall be governed by the provisions the Tennessee Prompt Pay Act (Tennessee Code Annotated Section 12-4-701 et seq.).

- C.5 Travel Compensation. The Contractor shall not be compensated or reimbursed for travel, meals, or lodging.

- C.6 Payment of Invoice and Protests. The payment of the invoice by the Institution shall not prejudice the Institution's right to object to or question any invoice or matter in relation thereto. Such payment by the Institution shall neither be construed as acceptance of any part of the work or service provided nor as an approval of any of the amounts invoiced therein.

- C.7 Invoice Reductions. The Contractor's invoice shall be subject to reduction for amounts included in any prior invoice or previously paid which are determined by the Institution, on the basis of audits conducted in accordance with the terms of this Contract, not to constitute proper remuneration for compensable services. Institution reserves the right to withhold payment on any invoice in which there is a bona fide dispute as to the quality of products or services provided under this Contract.
- C.8 Deductions. The Institution reserves the right to deduct from amounts which are or shall become due and payable to the Contractor under this or any contract between the Contractor and the Institution any amounts which are or shall become due and payable to the State of Tennessee or any of its subdivisions by the Contractor.
- C.9 Automatic Deposits. The Contractor shall complete and sign an "Authorization Agreement for Automatic Deposit (ACH Credits) Form." This form shall be provided to the Contractor by the Institution. Once this form has been completed and submitted to the Institution by the Contractor, all payments to the Contractor, under this or any other contract the Contractor has with the Institution shall be made by Automated Clearing House (ACH). The Contractor shall not invoice the Institution for services until the Contractor has completed this form and submitted it to the Institution.
- D. TERMS AND CONDITIONS:
- D.1 Required Approvals. The Institution is not bound by this Contract until it is approved by the appropriate Institution officials indicated on the signature page.
- D.2 Modification and Amendment. This Contract may be modified only by a written amendment executed by authorized signatories of the parties.
- D. 3 Warranties. The products and services delivered under this Contract shall be warranted as to, but not limited to, merchantability and fitness for the proposed purpose.

Contractor specifically warrants as follows:

- Contractor has the right to grant any and all proprietary software and third party software licenses conveyed in this Contract and in related documentation;
- Neither the System or other D2L products delivered under this Contract are violative of the intellectual property rights of any third party. This warranty shall extend for as long as TBR is contracting with the Contractor for maintenance or support of the System conveyed by this contract or any upgrade or substituted system. This warranty shall extend to any products developed by third parties and licensed to D2L for inclusion in the System. Contractor has made all changes to make the System compatible with Institution's Banner ERP system and will continue to do so with each new release of either a "standard version" Banner or the System throughout the life of this contract provide that the standard version shall include the baseline Banner ERP software and all modifications to Banner made for the TBR which are in use on the effective date of the contract;
- Contractor has made all changes to the software provided under this Contract required by State or federal law, will continue to do so throughout the life of this Contract and that all such changes will function as required;
- All services, including third party services, contracted hereunder will be performed in a professional and workmanlike manner, using personnel with sufficient experience in the relevant service/technology. Institution will have the right to refuse any personnel assigned if Institution reasonably believes such personnel do not possess the requisite skill sets. Upon written notice from TBR detailing the nature and deficiency of any services not rendered in accordance with this warranty, Contractor

will re-perform such services at no additional cost to TBR. If Contractor is unable to re-perform such services to TBR's satisfaction or it is not practicable to do so, TBR may take any action available at law or in equity. Services warranted under this subsection shall include, but are not limited to -

-Implementation services, including all activities to make the System fully operational; planning, training, train-the-trainer, conversion, installation, testing, etc.

-Operational training;

- All components of the System, any Contractor owned auxiliary software licensed to Institution and any third party programs provided Institution for the purpose of operating in conjunction with the System or auxiliary software will operate in accordance with the Contractor's proposal and the documentation related to the software provided;
- Maintenance will be provided for the software licensed under this Contract, including the Contractor's proprietary software and any third party software included in the System and for the updates/upgrades thereto, in a timely and professional manner. Contractor warrants that it will continue to provide maintenance service during the term of this Contract, including any renewal options exercised by Institution;
- RDBMS – Contractor warrants the compatibility of the product Microsoft SQL Server, or any other database management product it shall elect to work with the System and shall provide sufficient early notification to the Institution and the entity or entities hosting the System when upgrades to the RDBMS are needed or beneficial; and
- Other/additional/optional services offered under the Contract shall also be warranted as provided above.

Unless specifically stated above in this Section D. 3, all warranties shall run for the term of this Contract and renewal term options exercised by Institution. These warranties are in addition to the performance standards and penalties set forth in Attachment 3.

D.4 Termination for Convenience. The Institution may terminate this Contract without cause for any reason. Without limiting the breadth of the foregoing, the right to terminate without specifying a cause shall include the right to terminate hosting services provided by the Contractor. Termination under this Section D. 4 shall not be deemed a Breach of Contract by the Institution. The Institution shall give the Contractor at least ninety (120) days written notice before the effective termination date. The Contractor shall be entitled to receive compensation for satisfactory, authorized products received or services provided in an acceptable manner as of the termination date, but in no event shall the Institution be liable to the Contractor for compensation for any service which has not been rendered. Upon such termination, the Contractor shall have no right to any actual general, special, incidental, consequential, or any other damages whatsoever of any description or amount.

D.5 Termination for Cause. If the Contractor fails to perform its obligations under this Contract in a timely or proper manner, or if the Contractor violates any terms of this Contract, the Institution shall have the right to immediately terminate the Contract and withhold payments in excess of fair compensation for accepted products and services properly rendered; provided, however, Institution shall have the option to give Contractor written notice and a specified period of time in which to cure. Notwithstanding the above, the Contractor shall not be relieved of liability to the Institution for damages sustained by virtue of any breach of this Contract by the Contractor.

D.6 Contractor Performance / Breach. The Contractor shall be responsible for the completion of all work and the provision of all products as set out in the Contract. All work is subject to

inspection, evaluation, and acceptance by Institution. TBR may employ all reasonable means to ensure that the work is progressing and being performed in compliance with the Contract.

D.7 Events of Breach. A party shall be deemed to have breached this Contract if any of the following occurs through no fault of the other Party (However, this list is not exclusive.):

- failure to perform in accordance with any term or provision of the Contract;
- partial performance of any term or provision of the Contract;
- any act prohibited or restricted by the Contract; or
- violation of any warranty.

For purposes of this Contract, the above items shall hereinafter be referred to as a "Breach."

D.8 Remedies. The Institution shall have the following remedies:

- (a) Actual Damages. In the event of a Breach by Contractor, its employees or others for whom it is legally responsible under this Contract, the Institution shall have available the remedy of actual damages and any other remedy available at law or in equity. Actual Damages shall include but not be limited to damages incurred by the Institution if it, through no fault of the Institution, is unable to provide on line courses/education in whole or in part as a result of Contractor being unable to provide the contracted for software, hosting or support to the Institution as required by this Contract thereby requiring the Institution to cancel courses and refund money to the students. Damages shall be calculated based on either revenues Institution is required to re-pay students upon cancellation, or in the case of having to cancel courses for a future semester, damages shall be calculated by subtracting from the amount of gross revenues received by the Institution in the immediately preceding semester, those costs the Institution would have incurred by providing said on line courses/education in the same manner as it did in the immediately preceding semester.
- (b) Special Damages. In addition to any other remedies set forth herein, in the event the Contractor fails to provide software, support or hosting services necessary for the Institution to timely operate using the System to meet its LMS needs through no fault of the Institution, the Institution may procure any necessary products or services from other sources or perform such services itself and hold the Contractor responsible for any resulting cost.
- (c) Partial Default. In the event of a Breach related to hosting services, the Institution may declare a Partial Default. In which case, the Institution shall provide the Contractor written notice of: (1) the date which Contractor shall terminate providing the service associated with the Breach; and (2) the date the Institution will begin to provide the service associated with the Breach. Notwithstanding the foregoing, the Institution may extend the time periods contained in the notice written to the Contractor. Contractor agrees to cooperate fully with the Institution in the event a Partial Default is declared.

In the event the Institution declares a Partial Default, the Institution may withhold, together with any other damages associated with the Breach, from the amounts due the Contractor the greater of: (1) amounts which would be paid the Contractor to provide the defaulted service; or (2) the cost to the Institution of providing the defaulted service, whether the service is provided by the Institution or a third party. To determine the amount the Contractor is being paid for any particular service, the Institution shall be entitled to receive within five (5) business days, any requested, pertinent material from

Contractor. The Institution shall make the final and binding determination of the amount.

- (d) Termination of Contract. In the event of a Breach, the Institution may terminate the Contract immediately or in stages. The Contractor shall be notified of the termination in writing by the Institution. The notice shall hereinafter be referred to as Termination Notice. The Termination Notice may specify either that the termination is to be effective immediately, on a date certain in the future, or that the Contractor shall cease operations under this Contract in stages; provided, however, Institution shall have the option to give Contractor written notice and a specified period of time in which to cure. In the event of a termination, the Institution may withhold any amounts which may be due Contractor without waiver of any other remedy or damages available to the Institution at law or in equity. The Contractor shall be liable to the Institution for any and all actual or special damages incurred by the Institution and any and all expenses incurred by the Institution which exceed the amount the Institution would have paid Contractor under this Contract. Contractor agrees to cooperate with the Institution in the event of a Contract Termination or Partial Takeover.

If this Contract is terminated by any party for cause, Institution shall have the right to use the software, solely for purposes of transferring the courses to a new format, for 180 days after the effective date of the termination. A termination penalty may not be charged to TBR. TBR shall be liable for a pro rata license fee payment and payment for services rendered prior to the effective date of termination and any extension for course conversion.

- (e) Institution Breach. In the event of a Breach of contract by the Institution, the Contractor shall notify the Institution in writing and give Institution thirty (30) days to cure any Breach of contract by the Institution. The notice shall contain a description of the Breach. Failure by the Contractor to provide the written notice shall operate as an absolute waiver by the Contractor of the Institution's Breach. In the event of Breach by the Institution, the Contractor may avail itself of any remedy available in the Tennessee Claims Commission; provided, however, failure by the Contractor to give the Institution written notice and an opportunity to cure as described herein operates as a waiver of the Institution's Breach. Failure by the Contractor to file a claim in the Tennessee Claims Commission within one (1) year of the written notice of Breach shall operate as a waiver of the claim in its entirety. It is agreed by the parties that this provision establishes a contractual period of limitations for any claim brought by the Contractor.

- D.9 Partial Takeover. The Institution may, at its convenience and without cause, exercise a partial takeover of any service which the Contractor is obligated to perform under this Contract, including but not limited to any service which is the subject of a subcontract between Contractor and a third party, although the Contractor is not in Breach (hereinafter referred to as "Partial Takeover"). A Partial Takeover shall not be deemed a Breach of Contract by the Institution. Contractor shall be given at least one hundred twenty (120) days prior written notice of a Partial Takeover with the notice to specify the area(s) of service the Institution will assume and the date of assumption. Any Partial Takeover by the Institution shall not alter in any way Contractor's other obligations under this Contract. The Institution may withhold from amounts due the Contractor the amount the Contractor would have been paid to deliver the service as determined by the Institution. The amounts shall be withheld effective as of the date the Institution assumes the service. Upon Partial Takeover, the Contractor shall have no

right to recover from the Institution any actual, general, special, incidental, consequential, or any other damages whatsoever of any description or amount.

- D.10 Subcontracting. The Contractor shall not assign this Contract or enter into a subcontract for any of the services performed under this Contract without obtaining the prior written approval of the Institution. If such subcontracts are approved by the Institution, they shall contain, at a minimum, the sections of this Contract pertaining to "Conflicts of Interest", "Nondiscrimination", "Remedies", and "Governing Law". Notwithstanding any use of approved subcontractors, the Contractor shall be the prime contractor and shall be responsible for all work performed.
- D.11 Conflicts of Interest. (a) The Contractor warrants that no part of the total Contract Amount shall be paid directly or indirectly to an employee or official of the State of Tennessee as wages, compensation, or gifts in exchange for acting as an officer, agent, employee, subcontractor, or consultant to the Contractor in connection with any work contemplated or performed relative to this Contract.
- (b) No employee of a TBR institution responsible for initiating or approving requisitions shall accept or receive, directly or indirectly, from any firm, person or corporation to which any contract may be awarded, by rebate, gift, or otherwise, any money or anything of value whatsoever, or any promise, obligation or contract for future awards or compensation. Whenever any contract is awarded contrary to this prohibition, the contract shall be void.
- (c) If price-fixing, pricing collusion, multiple proposal submission, or any other behavior prohibited by the terms contained in this Section D. 7 is detected at any time during the course of this Contract, the Contract shall be deemed null and void.
- D.12 No Contingent Fees. No person or selling agency shall be employed or retained or given anything of monetary value to solicit or secure this Contract, except bona fide employees of the Contractor or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. In no event shall Institution be directly responsible for paying any commission or similar fee to and person or entity engaged by Contractor for the purpose of soliciting or securing this agreement.
- D.13 Non-discrimination. The Contractor hereby agrees, warrants, and assures that no person shall be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination in the performance of this Contract or in the employment practices of the Contractor on the grounds of disability, age, race, color, religion, sex, national origin, veteran status, or any other classification protected by Federal or State constitutional or statutory law.
- D.14 Records. The Contractor shall maintain documentation for all charges against the Institution under this Contract. The books, records, and documents of the Contractor, insofar as they relate to work performed or money received under this Contract, shall be maintained for a period of three (3) full years from the date of the final payment and shall be subject to audit at any reasonable time and upon reasonable notice by the Institution, the Tennessee Comptroller of the Treasury, or their duly appointed representatives. The financial statements shall be prepared in accordance with generally accepted accounting principles. The Contractor shall make all audit, accounting, or financial analysis work papers, notes, and other documentation available for review by the Comptroller of the Treasury or his/her representatives, upon request, during normal working hours either while the analysis is in progress or subsequent to the completion of this Contract.
- D.15 Monitoring. (a) The Contractor's activities conducted and records maintained pursuant to this Contract shall be subject to monitoring and evaluation by the Institution, the Comptroller of the Treasury, or their duly appointed representatives. Institution's authorized representative, the Contract Monitor, for the purposes of administration and monitoring of this Contract is Dr.

Raylean Henry, Associate Vice Chancellor for Academic Affairs, or her designee/successor. Such representative shall have final authority for acceptance of Contractor's services and if such services are accepted as satisfactory, shall so certify on each invoice submitted pursuant to the terms of payment.

(b) Contractor shall provide an Account Manager, and a Technical Account Representative to the Institution at a level able to make significant field decisions and who has access to D2L senior management. Institution shall approve the Account Manager and Technical Account Representative assigned to TBR and may request an alternate Account Manager Technical Account Representative be provide in the event that Institution is not satisfied with the level of support provided.

D.16 Performance Analysis. (a) The Contractor shall provide Institution with analytical tools, such as a "dashboard that will allow the Institution to make periodic analyses of the Contractor's performance under this agreement. Contractor, through its Account Manager and/or its Technical Account Representative, or such designee as agreed to by Institution agrees to hold periodic (at least monthly) telephone or in person meetings with Institution's Contract Monitor, or her designee for the purpose of reviewing the performance of the parties and to take such other actions as the parties deem necessary for the proper performance of the Contract. This does not include the Contractor's product named Analytics.

(b) Attachment 3 to this agreement sets forth a series of performance metrics agreed to by the parties. The performance standards and penalties provided for in that attachment are in addition to the parties duties to meet and confer under this Section D.12.

D.17 Archive – Purge – Storage. The parties agree to work together to design, develop and implement an archive and purge tool that will be both easily used and robust. Until such time as Contractor can deliver such a tool, Contractor agrees to refrain from charging Institution any amounts for increased storage.

D.18 Strict Performance. Except as otherwise specifically provided herein, failure by any party to this Contract to insist in any one or more cases upon the strict performance of any of the terms, covenants, conditions, or provisions of this Contract shall not be construed as a waiver or relinquishment of any such term, covenant, condition, or provision. No term or condition of this Contract shall be held to be waived, modified, or deleted except by a written amendment signed by the parties hereto.

D.19 Independent Contractor. The parties hereto, in the performance of this Contract, shall not act as employees, partners, joint venturers, or associates of one another. It is expressly acknowledged by the parties hereto that such parties are independent contracting entities and that nothing in this Contract shall be construed to create an employer/employee relationship or to allow either to exercise control or direction over the manner or method by which the other transacts its business affairs or provides its usual services. The employees or agents of one party shall not be deemed or construed to be the employees or agents of the other party for any purpose whatsoever.

D.20 Institution Liability. The Institution shall have no liability except as specifically provided in this Contract.

D.21 Force Majeure. The obligations of the parties to this Contract are subject to delay/prevention by causes beyond the parties' control that could not be avoided by the exercise of due care including, but not limited to, acts of God, riots, wars, strikes, epidemics or any other similar cause.

D.22 Institution and Federal Compliance. The parties shall comply with all applicable State and federal laws and regulations in the performance of this Contract.

- D.23 Governing Law. This Contract shall be governed by and construed in accordance with the laws of the State of Tennessee. The Contractor agrees that it will be subject to the exclusive jurisdiction of the Tennessee Claims Commission in actions that may arise under this Contract. The Contractor acknowledges and agrees that any rights or claims against the State of Tennessee or its employees hereunder, and any remedies arising therefrom, shall be subject to and limited to those rights and remedies, if any, available under **Tennessee Code Annotated**, Sections 9-8-101 through 9-8-407.
- D.24 Severability. If any terms and conditions of this Contract are held to be invalid or unenforceable as a matter of law, the other terms and conditions hereof shall not be affected thereby and shall remain in full force and effect. To this end, the terms and conditions of this Contract are declared severable.
- D.25 Headings. Section headings of this Contract are for reference purposes only and shall not be construed as part of this Contract.
- E. OTHER TERMS AND CONDITIONS:
- E.1 Legislative Compliance. Contractor agrees that it will make all changes to the software provided under this Contract required by State or federal law, will continue to do so throughout the life of this Contract and that all such changes will function as required;
- E.2 Assignment. Except as otherwise provided for herein below, neither party may assign any of its rights or obligations pursuant to this Contract, and any attempt at such assignment will be void without the prior written consent of the other party. Notwithstanding the foregoing, Contractor's assignment of this Contract or of any Contractor's rights pursuant to this Contract to Contractor's successor by merger or consolidation or to any person or entity that acquires all or substantially all of its capital stock or assets, or Contractor's assignment of this Contract to any entity which now or in the future is controlled by, controlling or under common control with Contractor will not be considered "prohibited assignments" for purposes of this Contract, provided that the party to whom Contractor has so assigned this Contract agrees to be bound by all the pricing, costs, rates, terms and provisions of this Contract for the initial term and any renewals. AND PROVIDED FURTHER, however, and notwithstanding the foregoing, Contractor will have no right to assign this Contract, or any of Contractor's rights hereunder, to any entity that has been debarred by the State of Tennessee, the Institution or (with regard to any individual Institution, debarred by such Institution) from conducting business with or within the Institution or the State of Tennessee and provided further that the right of automatic assignment of the Contract shall not apply if the purchaser or merging party of Contractor shall be Blackboard, Inc. or any parent, subsidiary of Blackboard, Inc.
- E.3 Source Code Availability and Access. The Contractor agrees to establish an escrow account with a mutually acceptable escrow agent in which it will maintain a copy of the current and prior versions of the source code, object code, compiling instructions, and all relevant development and user related documentation for all software and all other documentation relating to the System licensed to Institution. The escrowed materials shall be updated within 45 days after any substantive release by Contractor, or any successor organization, for the term of the Contract. The agreement with the escrow agent shall authorize the escrow agent to release the escrowed materials to the Tennessee Board of Regents in the event Contractor, or any successor organization, shall in the ordinary course of business, and for the term, and at the prices provided in the Contract, cease, for any reason, including the filing of bankruptcy, offering on-going maintenance and support to the most recent version of the products licensed hereunder.

- E.4 Right to Modify Source Code. If the Institution shall come into possession of the source code for any of the software licensed to Institution under the Contract, the Institution shall thereafter have the absolute right to modify it to perform any function, which the Institution deems desirable and Institution shall thereafter be the owner of any additional source code of which its personnel are authors, unless, pursuant to the Escrow Agreement, the code is returned to Contractor.
- E.5 Notices. All instructions, notices, consents, demands, or other communications shall be sent in a manner that verifies proof of delivery. Any communication by facsimile transmission shall also be sent by United States mail on the same date as the facsimile transmission. All communications which relate to any changes to the Contract shall not be considered effective until agreed to, in writing, by both parties. Notice shall be given as set out below or as otherwise provided in writing.

The Institution:

Angela Gregory Flynn
Director of Purchasing and Contracts
Tennessee Board of Regents
1415 Murfreesboro Road, Suite 350
Nashville, TN 37217
(615) 366-4436 PHONE
(615) 366-2243 FAX
angela.flynn@tbr.edu

The Contractor:

John Baker
President & CEO
Desire2Learn Incorporated
151 Charles Street West, Suite 400
Kitchener, Ontario
Canada N2G 1H6

cc: Legal Department
Attn: Diane Lank, General Counsel

(519) 772-0325 PHONE
(519) 772-0324 FAX

John.Baker@Desire2Learn.com

CC: Diane.Lank@Desire2Learn.com (Legal Dept)

- E.6 Training. Contractor shall provide a license to use and copies of all training materials relating to the System. Materials shall mean any version of printed or online D2L materials, including without limitation the instructor's guide, administrator's guide, custom handouts, and course templates developed by Contractor.
- E.7 Insurance. Throughout the Contract Term, the Contractor will at all times maintain at its own cost the following minimum insurance coverage in substance and form reasonably acceptable to Institution, naming the Tennessee Board of Regents as an additional insured, excepting specifically for the Workers' compensation coverage, and, by not later than the first invoice, will furnish Institution with certificates evidencing such insurance. Each such certificate will provide in pertinent part that the issuer will use reasonable efforts to provide Institution with prior written notice in the event of any cancellation of the insurance coverage provided for under this Agreement. In the event of non-renewal, the Contractor shall provide Institution

evidence of new insurance within ten (10) calendar days. Coverage to be maintained shall include: (i) Workers' compensation as required by the laws of the jurisdiction in which the employee is located; (ii) Employer's Liability Insurance with a combined single limit of One Million Dollars (\$1,000,000); (iii) Comprehensive Commercial General Liability Insurance, including operations/completed operations, products and contractual liability (including defense and investigating costs, and covering, without limitation but in particular, this Agreement), with limits of Two Million Dollars (\$2,000,000) each occurrence (BI and PD combined), and Five Million Dollars (\$5,000,000) Products and Completed Operations aggregate; (iv) Comprehensive Business Automobile Liability insurance, including property damage covering all owned, rented and/or utilized vehicles used in connection with performance of Contractor's services under this Agreement, with a combined single limit of not less than One Million Dollars (\$1,000,000) (BI and PD combined); and (v) Travel Agents' Errors and Omissions Insurance, in the amount of One Million Dollars (\$1,000,000) per wrongful act and One Million Dollars (\$1,000,000). Any deductibles or self-insured retention in the above described policies must be paid and are the sole responsibility of Contractor. Failure to provide evidence of such insurance coverage is a material breach and grounds for termination of the Contract.

- E.8 Secretary of State Certification. The Contractor shall furnish certification of authority to conduct business in the State of Tennessee as a condition of the Contract award. Such registration is obtained from the Secretary of State, who will also provide the certification thereof.
- E.9 Institution Furnished Property. The Contractor shall be responsible for the correct use, maintenance, and protection of all articles of nonexpendable, tangible, personal property furnished by the Institution for the Contractor's temporary use under this Contract. Upon termination of this Contract, all property furnished shall be returned to the Institution in as good order and condition as when received, reasonable use and wear thereof excepted. Should the property be destroyed, lost, or stolen, the Contractor shall be responsible to the Institution for the residual value of the property at the time of loss.
- E.10 Contract Documents. Included in this Contract by reference are the following documents:
- a. This Contract document and its attachments;
 - b. The 2006 Request for Proposal and its associated amendments; and
 - c. D2L's Proposals dated July 20 and September 14, 2006 to the extent that the content of the proposal does not refer to original implementation matters. In the event of a discrepancy or ambiguity regarding the interpretation of this Contract, these documents shall govern in order of precedence as listed above.
- E.11 Prohibited Advertising. The Contractor shall not refer to this Contract or the Contractor's relationship with the Institution hereunder in commercial advertising in such a manner as to state or imply that the Contractor or the Contractors services are endorsed. Contractor shall not use the Tennessee Board of Regents or the name or trademark or the name or trademark of any of the Tennessee Board of Regents' constituent institutions in any promotional or marketing materials or press release without prior written approval of the Tennessee Board of Regents, with the exception of use on a customer list.
- E.12 Public Records. This Contract is subject to, and both parties will comply with the provisions of the Tennessee Open Records Act.
- E.13 Copyrights and Patents / Institution Ownership of Work Products. (a) Grant of License. Contractor grants Institution a world-wide, annual, non-exclusive, fully paid up (after full payment to Contractor for the applicable term) license to use any proprietary software products delivered under this Contract. The Institution shall have royalty-free and unlimited right to use, disclose, reproduce, or publish, for any purpose whatsoever, as well as share in

any benefits derived from all work products created, designed, developed, or derived from the services provided under and during any term of this Contract. The Institution shall have the right to copy, distribute, modify and use any training materials delivered under and during any term of this Contract for internal purposes only. The license granted herein shall inure to the benefit of the Tennessee Board of Regents and all its member institutions, and, without limiting the generality of the foregoing, any institute, or Center of Excellence or similar organization connected to or affiliated with the Tennessee Board of Regents, for their internal business operations and cover any number of future terminals, branches, or business locations.

(b) Indemnification. The Contractor agrees to indemnify and hold harmless the Institution as well as its officers, agents, and employees from and against any and all claims or suits which may be brought against the Institution for infringement of any third party's intellectual property rights, including but not limited to, any alleged patent or copyright violations. The Institution shall give the Contractor written notice of any such claim or suit and full right and opportunity to conduct the Contractor's own defense thereof. In any such action brought against the Institution, the Contractor shall take all reasonable steps to secure a license for Institution to continue to use the alleged infringing product or, in the alternative, shall find or develop a reasonable, non-infringing alternative to satisfy the requirements of this Contract and shall install and implement such solution for the Institution at no additional cost to Institution. If, and only if, neither of these options is feasible, Contractor shall return the applicable pro-rata portion of the license fee for the then current term.

Contractor further agrees that any settlement of any claim brought against Institution is subject to the approval of the Tennessee Attorney General pursuant to ***Tennessee Code Annotated***, Section 8-6-106.

(b) Product Licensing. TBR shall not be required to accept or sign nor shall its use be subject to any service/product license other than this Contract for any service/product provided by Contractor under this Contract.

E.14 Hold Harmless. The Contractor agrees to indemnify and hold harmless the state of Tennessee as well as its officers, agents, and employees from and against any and all claims, liabilities, losses, and causes of action which may arise, accrue, or result to any person, firm, corporation, or other entity which may be injured or damaged as a result of acts, omissions, or negligence on the part of the Contractor, its employees, or any person acting for or on Contractor's behalf under this Contract. The Contractor further agrees it shall be liable for the reasonable cost of attorneys for the Institution in the event such service is necessitated to enforce the terms of this Contract or otherwise enforce the obligations of the Contractor to the Institution. Special or consequential damages, and only such damages, shall be limited to up to two times the total cost of the current term of this Contract.

In the event of any such suit or claim, the Contractor shall give the Institution immediate notice thereof and shall provide all assistance required by the Institution in the Institution's defense. The Institution shall give the Contractor written notice of any such claim or suit, and the Contractor shall have full right and obligation to conduct the Contractor's own defense thereof. Nothing contained herein shall be deemed to accord to the Contractor, through its attorney(s), the right to represent the Institution of Tennessee in any legal matter, such rights being governed by ***Tennessee Code Annotated***, Section 8-6-106.

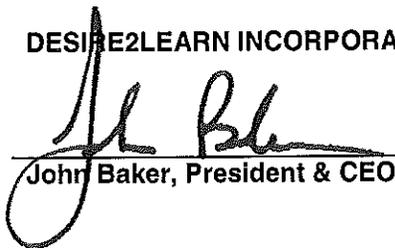
E.15 Debarment and Suspension. The Contractor certifies, to the best of its knowledge and belief, that it and its principals:

- a. are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal or state department or agency;

- b. have not within a three (3) year period preceding this Contract been convicted of, or had a civil judgment rendered against them from commission of fraud, or a criminal offence in connection with obtaining attempting to obtain, or performing a public (Federal, state, or local) transaction or grant under a public transaction; violation of Federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;
 - c. are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, state, or local) with commission of any of the offenses detailed in section b. of this certification; and
 - d. have not within a three (3) year period preceding this Contract had one or more public transactions (Federal, state, or local) terminated for cause or default.
- E.16 Change in Organization. Contractor shall promptly notify Institution of any changes in its officers, directors, and key employees, change of location of its principal offices, material change in the business or financial affairs of Contractor which could affect its ability to provide the products and services under this Contract.
- E.17 Educational Support. For each year during the term, Contractor will provide Institution with financial support in the amount of \$10,000 either in cash or in-kind, to hold, present or attend educational meetings regarding on-line education. Additional support by Institution could include providing speakers, conference materials or a display booth.
- E.18 Advisory Board Membership. Contractor shall continue to make available a seat on its Advisory Board for Institution's appointed representative, which seat shall continue to be made available during the term of this Contract and any renewals.

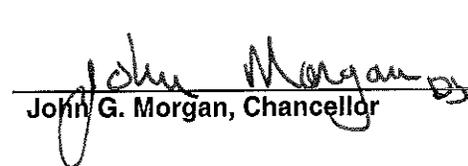
IN WITNESS WHEREOF:

DESIRE2LEARN INCORPORATED:


 John Baker, President & CEO

December 16, 2011
 Date

TENNESSEE BOARD OF REGENTS:


 John G. Morgan, Chancellor

1/25/12
 Date

LIST OF PRODUCTS & SERVICES

The spreadsheet labeled Exhibit I, which is attached to this Attachment I, lists all products and services purchased and the price for each as well as the total Contract cost for the initial term and up to four one year renewals. The fixed costs/rates provided on Exhibit I may only be modified by amendment to this Contract. Rates set forth on Exhibit I are not subject to escalation; however, charges for the Desire2Learn software as listed under each yearly charge reflect agreed upon increases. The Desire2Learn software and services total yearly charge, may be increased based on increases in users at the rates provided on Exhibit I. All other costs, including the rates for hosting and optional/additional products and services, are fixed for the initial term and four annual renewals. The information provided in this Attachment shall take precedence in interpreting this Contract.

With regard to charging of Desire2Learn software and services, the initial number of aggregate number of licensed users (NLU) across all TBR organizations for the initial term of this Contract is 175,000 users per semester. A licensed user is defined to be a unique individual user across the TBR organizations who has accessed the system at least one time. The intent of this provision to be to eliminate the double counting of a user because he or she may play more than one role at their institution or another related institution, including ROCC and RODP, and to eliminate from the total those account id's that are created to allow for the performance of administrative tasks but are not associated with an individual person. TBR will work with D2L to help identify duplicated users properly and timely. Licensed users shall include all faculty, staff, and on-line users/students of all TBR institutions.

The number of users will be evaluated annually at the end of each term of the Contract in order to determine if the NLU has been exceeded during the previous term. The mean NLU shall be calculated by averaging the fall and spring NLUs. Should the mean NLU in the prior term of this Contract have been in excess of 185,000, the cost for the new term to the TBR system for the D2L Learning Edition software may be increased to an amount where the charge for the D2L Learning Edition software is equal to the average of the fall and spring NLUs times the annual D2L Learning Edition software license fee rate per user for the appropriate year in which the evaluation is performed, as set forth on Exhibit 1.

In the event that a change or development substantially reduces any of D2L costs for providing any of the products or services provided under this Contract, D2L will provide TBR a lower cost and/or credit for other future payments under the Contract in recognition of the savings opportunity.

CONTRACT DELIVERABLES:

Products. D2L shall provide its most current version of Desire2Learn® Learning Environment, Learning Repository and LiveRoom products (System), which shall include all related documentation and user manuals, printed code, as well as technical support, which shall include access to web resources (FAQs, web-based knowledge forum), email and telephonic support for system integrity issues, service patches, upgrades/updates, service packs, and subsequent enhancements provided by D2L.

Hosting Service. For the initial term, and unless specified by TBR otherwise, for all subsequent terms, D2L will provide two instances of the software for the TBR system at its facility in North America. The first instance will recognize 23 production organizations – each of the 19 TBR colleges and universities shall be allocated an organization; the ROCC, ROCE, TTCs and Central Office will each be allocated 1 organization. The second instance which will also recognize the same 23

organizations will be the test site which can be accessed for testing and development by all organizations.

D2L will provide such managed hardware networking, firewalls, redundant high-bandwidth connectivity to internet backbone loops, high performance server infrastructure, backups and software so as to allow the operation of the System for the benefit of each of the organizations as well as a test environment for those organizations. D2L shall be responsible for all support, maintenance, security and optional disaster recovery relating to the System for the benefit of TBR. At the end of each semester, D2L will provide the various organizations with a copy, on appropriate media, of that organizations then current system.

The hosting services provided under this Contract shall be equal to or exceed the standards that are common and acceptable within the industry.

If at any time the System cannot be accessed or there is some other emergency, D2L shall provide notice and other pertinent information to the Authorized Service Administrators (ASAs) as soon as reasonably possible.

Other than a change required in an emergency, D2L will provide advance notice to the TBR ASAs of any scheduled changes to the System which might affect TBR access to the System. D2L and TBR will evaluate use of the System and agree upon periods of low demand for routine maintenance and the implementation of upgrades/patches.

Subject to storage pricing overages, there will be no limits/quotas on the memory/space allocated for any course, or the total content or courses of TBR. There will no automatic deletion of courses or users unless and until the parties make a further agreement in writing. Subject to the terms of Section D 17 of the Contract, the amount charged TBR for any additional storage shall be limited to One Hundred Thousand Dollars or the market price, whichever is less.

At TBR's discretion, the term of D2L hosting services may be terminated as is set forth in Section D.4 of the Contract. Subject to D2L consulting fees, D2L shall provide any information and assistance reasonably required for TBR to assume responsibility for the hosting service, including providing TBR a current image for each organization in DVD or the then applicable format. For so long as D2L is providing hosting services, D2L acknowledges and agrees that it will take all reasonable steps necessary to protect all student records pursuant to the U.S. Family Educational Rights and Privacy Act of 1974, (FERPA) and the applicable Federal Regulations set forth at 34 C.F.R. Sec. 99.31.i

Services/Implementation/Special Projects. Any implementation or services or special projects contracted for under this Contract shall be timely completed pursuant to the plan of work relating to the project. All Project planning/scheduling will include developing a comprehensive written plan, a timeline and appropriate milestones. The written project plan shall define the services to be performed by D2L, the roles and responsibilities of D2L and TBR and any appropriate measurements as would be common and acceptable within the industry. For emphasis, but not for purposes of limitation, the parties agree that the requirements of this Section are material terms to any services, implementation or special projects and that failure to conform to these requirements shall constitute a Breach of this Contract as provided in Section D.4.3.

Integration Maintenance. D2L will make timely upgrades or patches or other required changes which would allow communication between the System and the SIS system then being utilized by each of the organizations at all times. D2L will provide telephonic and email support 24x7x365 to resolve all technical issues relating to the integration of the System and the SIS systems.

Support service. Under this Contract, D2L shall provide to TBR access to web resources (FAQs, web-based knowledge forum, technical support email) and on-going access to patches and service packs.

Test Instance. As noted above, D2L will provide a second instance of the software which will serve as the test site. The test site, and without limiting the generality of the foregoing, the servers utilized at the test site, shall be sufficiently robust to all for the testing of all upgrades, patches, integrations or other element which can be incorporated into the instance that runs in the production environment for each organization.

Setup. The test site will have a database separate from the first instance.

Maintenance. As part of the maintenance service for the test site, D2L will ensure that upgrades or patches work properly before application to the production environment.

Help Desk Services. D2L shall provide D2L Premium support to TBR ASAs on a 24x7x365 basis. The services to be provided include the following:

- Server Issues;
- Campus Network/Administrator;
- Query Campus Access Point;
- Course corruption involving the underlying application software and/or database;
- Backup restoration;
- Access (search) of web access logs and/or error logs in case of legal appeal;
- Assistance in batch archival of backups to local campus storage;
- Integration issues;
- Other.

TBR will provide to D2L a list of ASAs and a back-up for each organization and for the TBR Tier 2 help desk. TBR will be responsible for keeping this list current.

The initial term of this Contract provides for 200 ASA contacts per month which will be aggregated on a TBR system-wide basis for all organizations. No ASA shall be denied helpdesk service even if TBR has exceeded its 200 contacts in any particular month.

D2L will provide TBR a monthly report detailing usage by ASA, by organization. An ASA "contact" is defined as a trouble ticket concerning one issue and the efforts to resolve it; it may include multiple telephone, email, chat and/or other means of communication between an ASA and D2L. No ticket or communication which is occasioned by a D2L programming, network, software or hardware error shall be counted as a contact.

The helpdesk services provided under this Contract shall be equal to or exceed the standards that are common and acceptable within the industry.

LiveRoom. The LiveRoom license provided under this Contract also provides for LiveRoom Express licensing.

LiveRoom Hosting. If requested, hosting services shall be provided for LiveRoom and LiveRoomExpress.

Learning Object Repository (LOR). If requested, D2L will provide licensing and set up services for LOR for TBR. The LOR provided under this Contract shall be rule based and conform to industry standards.

Optional Products and Services/Technical Account Manager (TAM). Exhibit I also lists all optional/additional products and services which may be purchased under this Contract and the price/rate for each. The fixed costs provided on Exhibit I may only be modified by amendment to this Contract. The optional/additional products and services are identified on Exhibit I. Included in Exhibit

1 is a listing for Technical Account Manager (TAM) services made available at three levels, from lowest to highest, "Named", "Assigned" and "Dedicated", together with the annual charge for each level of service. Notwithstanding the listing on Exhibit 1, the parties hereby agree that D2L will continue to provide TAM services to TBR, at least at the Assigned level, without charge from the date of this contract to and including October 1, 2012 in order for TBR to be able to evaluate during subsequent spring, summer and fall semester start-up cycles, the effectiveness and value of continuing to utilize TAM services. By September 15, 2012, D2L will provide TBR a report setting forth the areas in which the TAM services previously provided to TBR have added value by providing services and results that are in excess of the service levels and results TBR would have expected to have realized had no TAM services been provided. Upon the receipt of the report TBR shall have thirty (30) days in which to analyze its contents and thereafter TBR shall elect one of the following options: (1) discontinue TAM services, or (2) elect to pay for TAM services at the level of its choosing at the corresponding annual rate set forth in Exhibit 1, including a pro-rated amount for October 1, 2012 to the end of that contract year.

CONTRACT RATES

Attachment 1
Exhibit 1

Unit	CY 2012	CY 2012	CY 2013	CY 2014	CY 2015
Products & Services In Use					
Learning Environment Unit Charge (3.3% annual escalator)	\$ 5.25	\$ 5.42	\$ 5.60	\$ 5.79	\$ 5.98
Learning Environment Payment (assumes 175,000 users)	Annual \$ 918,750	\$ 949,069	\$ 980,388	\$ 1,012,741	\$ 1,045,161
Hosting Service	Annual \$ 693,000	\$ 693,000	\$ 693,000	\$ 693,000	\$ 693,000
Integration Maintenance	Annual \$ 32,500	\$ 32,500	\$ 32,500	\$ 32,500	\$ 32,500
Test Environment Maintenance	Annual \$ 31,000	\$ 31,000	\$ 31,000	\$ 31,000	\$ 31,000
Premium Administrator Support	Annual \$ 72,000	\$ 72,000	\$ 72,000	\$ 72,000	\$ 72,000
LiveRoom License	Annual \$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000
LiveRoom Hosting	Annual \$ 37,500	\$ 37,500	\$ 37,500	\$ 37,500	\$ 37,500
Learning Repository	Annual \$ 125,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 125,000
Additional Storage (7TB Total)	Annual \$ 253,500	\$ 253,500	\$ 253,500	\$ 253,500	\$ 253,500
End of Semester Back-ups	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000
Subtotal - Services Currently Utilized	\$ 2,265,250	\$ 2,295,569	\$ 2,326,888	\$ 2,359,241	\$ 2,392,661

Optional Services		
IS Consulting	\$ 185	per Hour
Custom Integrations SOW	\$ 210	per Hour
New Instance Creation	\$ 2,500	Per Instance
New Organization Creation	\$ 1,500	Per Org

Optional Training Rates		
Onsite (per Instructor)	\$ 3,500	per Day
Virtual (per Instructor)	\$ 2,500	per Day

LiveRoom		
Setup		
Setup (under 100 users)	\$ 2,500	per Org
Setup (101-300 Users)	\$ 4,500	per Org
Overages		
Annual (over 500 concurrent users)	\$ 175	per user
Annual w/hosting (over 500 concurrent users)	\$ 250	per user
Institutional Pricing		
50 concurrent users (Includes hosting)	\$ 12,500	annual
100 concurrent users (Includes hosting)	\$ 25,000	annual

Support Services		
Premium Plus End-User		
Help Desk (750 contacts/month)	\$ 250,000	Annual
Additional ASC's		
Basic Support	\$ 5,500	Annual
Premium Admin Support	\$ 4,000	Annual
Premium Plus Admin Support		
Low Volume Add-on	\$ 19,750	50 con/mth
High Volume Add-on	\$ 16,000	50 con/mth
Monthly overage	\$ 30	per contact
Technical Account Manager		
Named	\$ 25,000	Annual
Assigned	\$ 50,000	Annual
Dedicated	\$ 200,000	Annual

Additional Products

Desire2Learn ePortfolio (System Based Pricing)	Set Up	Per User
0 to 50,000 users	\$ 30,000	\$ 4.75
50,001 to 100,000 users	\$ 40,000	\$ 3.25
100,001 to 150,000 users	\$ 50,000	\$ 2.75
150,001 users and greater	\$ 60,000	\$ 2.20

Hosting Storage Expansion	\$100,000	\$100,000	per TB per year
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Business Continuity Services (Disaster Recovery)			
Cold Replication (RPO 24 Hours, RTO 72 Hours)	\$265,350		per Year
Warm Replication - Bronze Level (RPO 12 Hours, RTO 24 Hours)	\$473,250		per Year
Warm Replication - Silver Level (RPO 8 Hours, RTO 12 Hours)	\$646,500		per Year
Warm Replication - Gold Level (RPO 4 Hours, RTO 6 Hours)	\$646,500		per Year

Desire2Learn Analytics (System Based Pricing)	Set Up	Per User
0 to 50,000 users	\$ 20,000	\$ 2.50
50,001 to 100,000 users	\$ 30,000	\$ 1.47
100,001 to 150,000 users	\$ 40,000	\$ 1.25
150,001 users and greater	\$ 50,000	\$ 1.20

Desire2Learn Campus Life (Institution Based Pricing)	Set Up	Annual
2,501 to 5,000 users	\$ 2,500	\$ 3,850
5,001 to 7,500 users	\$ 3,500	\$ 5,650
7,501 to 10,000 users	\$ 5,000	\$ 10,250
10,001 to 20,000 users	\$ 8,000	\$ 18,500
20,001 to 30,000 users	\$ 11,000	\$ 24,950

Desire2Learn Capture			
One Time Costs			
Capture Station 300 (HW & SW)	\$ 6,000		per station
Capture Station - Desktop (SW only)	\$ 2,800		per desktop
Server Software (for on premise only)			
Enterprise On-Premise (per server)	\$ 15,000		Annual
On-Premise Server Implementation	\$ 1,500		One time
Additional Supported Device License (per device, station or desktop)	\$ 500		Annual
Enterprise Hosting (storage & bandwidth)			
Starter	\$ 6,700	Annual	Note: Portal + 25 GB/month
Basic	\$ 6,900	Annual	Note: Portal + 50 GB/month
Regular	\$ 7,500	Annual	Note: Portal + 100 GB/month
Advanced	\$ 9,000	Annual	Note: Portal + 250 GB/month
Premium	\$ 11,700	Annual	Note: Portal + 500 GB/month
Support			
Standard	\$ 2,750	Annual	Note: up to 10 incidents per year
Premium	\$ 4,000	Annual	Note: up to 20 incidents per year

TBR PERFORMANCE METRICS

To help assure that the performance of the hosting services provided by D2L remain within an acceptable range and to provide D2L with an incentive to continue to improve the responsiveness of its hosting services, the Parties have agreed to the following set of standards by which the hosting performance is to be measured and have also agreed to the financial penalties set forth below which D2L will incur if the articulated performance standards are not met. Nothing in this Addendum II is intended to replace or supplant any other remedies available to the Tennessee Board of Regents based on inadequate performance set forth in the Agreement which this Addendum supplements.

Prior to the commencement of the agreement, D2L shall be responsible for developing or procuring at its sole cost, a software performance monitor (hereinafter the "Monitor") capable of measuring the Criteria listed below on a scheduled basis (initially every 20 minutes) and providing succinct reports to the TBR regarding the performance level of D2L's hosting service and specifically providing D2L and TBR information regarding the date, time and duration of any incident as reported by monitoring (unless the monitor is falsely reporting) where any of the Availability Metrics fall below the standards set forth below. Said Monitor shall be located at an agreed upon location within D2L's firewall.

The following is a listing of the Criteria by which the performance of the D2L applications in the hosted environment will be measured and the specific time limits for each performed task (note, no listed metrics shall apply during, and no penalties shall flow from, scheduled maintenance or a force majeure event).

Application Availability Criteria

Availability Metrics	Measurement*
<p>Home Page Response Time - The time it takes for an org home page to load in a browser.</p>	<p>Expected pre-defined page load time should not exceed 5 seconds. The Executive Director of Operations of ROCC and the Senior Director, Services of D2L (or their designees) shall agree on the pre-defined page.</p>
<p>Login Time - Process of authentication into an org</p>	<p>Expected pre-defined authentication completion time should not exceed 10 seconds. The Executive Director of Operations of ROCC and the Senior Director, Services of D2L (or their designees) shall agree on the pre-defined page.</p>
<p>Upload Time – completion of uploading a 10MB file to the Dropbox Tool</p>	<p>File upload completion should not exceed 60 seconds</p>
<p>Download Time – completion of downloading a 10MB file to the Dropbox Tool</p>	<p>File download completion should not exceed 60 seconds</p>

<p>Quizzing Tool Response Time – The time it takes for a quiz in a course to load complete in a browser</p>	<p>Quiz Tool load time in pre-defined courses should not exceed 30 seconds. The Executive Director of Operations of ROCC and the Senior Director, Services of D2L (or their designees) shall agree on the pre-defined page.</p>

If during the performance of the Agreement, the Parties mutually come to understand that there are additional criteria which should be included or a different schedule for monitoring, they agree to confer and amend this section.

D2L agrees to provide TBR with a copy of a report of the performance of the hosting service, including copies of any relevant print outs from the Monitor showing incidents that exceed the Criteria set forth above, no later than 30 days after the end of the first ten days of the semester and every 45 days thereafter.

In the event that the Monitor reports that incidents which exceed the Availability Criteria have occurred more frequently during the Measurement Periods set forth below, D2L will owe the amount listed:

Availability Metric	Measurement Period	Client Credit
≥3 missed performance metrics occurring concurrently	During the first 10 days of a semester	2% Credit on Hosting Fees in Measurement Period
≥4 missed performance metrics occurring concurrently	During the first 10 days of a semester	3% Credit on Hosting Fees in Measurement Period
≥3 missed performance metrics occurring concurrently	At any point between 11 th day of the semester until the last day of the semester	1% Credit on Hosting Fees in Measurement Period

There is no limitation on the number of incidents which violate an Availability Metric and invoke a Client Credit which can occur within any particular measurement period. A separate incident will be deemed to have occurred when, after a first incident where the Availability Criteria have returned to a state in which all Metrics are within an acceptable range, a new incident qualifying under one of the Availability Metrics occurs or eight hours have elapsed and the Availability Criteria have not yet returned to a state in which all Metrics are within an acceptable range, whichever occurs first.

The maximum credit for all missed availability metrics is 5% of Hosting fees on an annual basis. All Credits will be applied to the subsequent year's hosting fees except that if hosting services are terminated by TBR before all credits have been applied, D2L will be required to make a cash payment to TBR at the conclusion of the last hosting period.

Analysis of Degree Compass Data Fall 2012

Degree Compass has now been installed at the three replication sites for a whole semester. At University of Memphis and Nashville State CC it has been available for all students' use since the spring. At UM it has now been adopted as an integral part of the advising experience. At both schools there has been well-publicized campaign to raise awareness of the system during the fall. Consequently, the system was much more widely utilized in creating spring schedules than fall.

The results from all three campuses were very encouraging. Each campus' results replicate the grade prediction resolution achieved at APSU. At UM on average predicted grades were within .5914 of the awarded grades, with 89% who were predicted to pass the course indeed passing; at NSCC on average predicted grades were within .6487 of the awarded grades, with 90% who were predicted to pass the course indeed passing; at VSCC on average predicted grades were within .7051 of the awarded grades with 87.6% who were predicted to pass the course indeed passing. These results confirm that the grade prediction engine successfully predicts grades in a diversity of settings from a rural community college to an urban research 1 university.

A more detailed analysis of the connections between course star ratings and course success shows that students at all three replication sites obtained substantially higher grades in "4-star" or above courses than were awarded overall. Indeed at every institution more than 90% of students who took a 4-star class received an A or a B, compared with 62-63% A or Bs awarded in general and more than 62% who took a 4-star class received an A, compared with 35-37% overall. The analysis shows that this effect is felt at every school and at every at every course level. Perhaps most striking is the fact that the system 92.9% of students at University of Memphis who took a 4-star freshman level class

received an A or a B, compared with 56.1% in general, and 92.5%, 96.5% of students who took 4-star rated developmental level classes at Volunteer and Nashville State Community Colleges received an A or a B, compared with 65.8% and 69% in general. A fuller account of the analysis is in the tables below.

Volunteer State

All Classes	Overall	4star	<4star
A	36.6%	63.9%	14.6%
AB	63.5%	91.7%	40.7%
ABC	77.6%	96.5%	62.4%

1000-level	Overall	4star	<4star
A	36.4%	65.3%	15.3%
AB	62.0%	91.2%	40.6%
ABC	76.4%	96.3%	61.9%

2000-level	Overall	4star	<4star
A	33.9%	62.6%	15.2%
AB	61.3%	90.7%	42.2%
ABC	78.2%	96.0%	66.7%

Developmental	Overall	4star	<4star
A	36.1%	60.3%	12.0%
AB	65.8%	92.5%	39.2%
ABC	78.4%	96.9%	60.1%

Nashville State

All Classes	Overall	4star	<4star
A	37.6%	62.0%	17.0%
AB	66.8%	91.7%	45.7%
ABC	82.3%	96.8%	70.0%

1000-level	Overall	4star	<4star
A	38.7%	62.3%	18.9%
AB	65.7%	89.3%	45.8%
ABC	81.7%	94.7%	70.7%

2000-level	Overall	4star	<4star
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A	40.0%	62.0%	19.6%
AB	67.8%	90.4%	46.7%
ABC	83.8%	96.3%	72.1%

Developmental	Overall	4star	<4star
A	30.3%	57.5%	7.6%
AB	69.0%	96.5%	46.2%
ABC	82.0%	99.0%	67.9%

University of Memphis

All Classes	Overall	4star	<4star
A	35.6%	64.0%	5.5%
AB	62.7%	93.5%	29.9%
ABC	77.6%	97.0%	56.9%

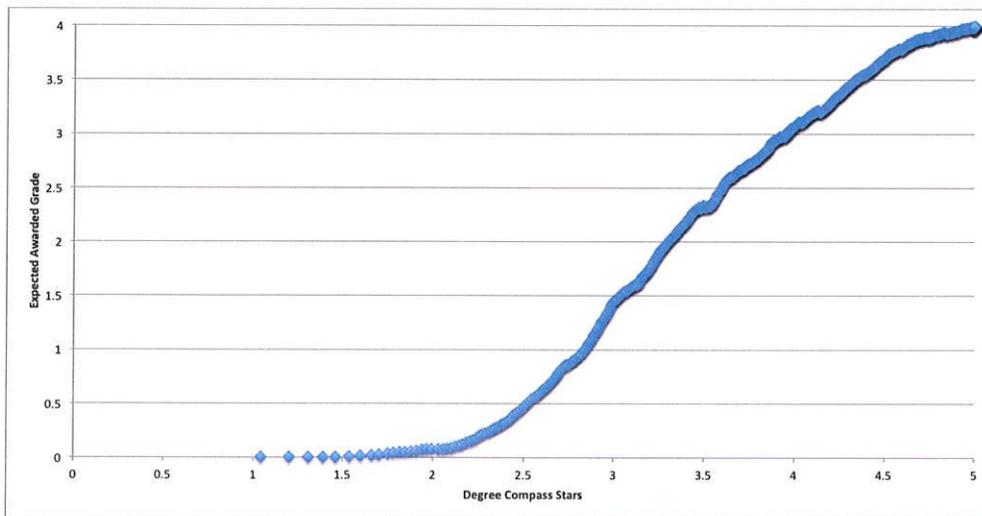
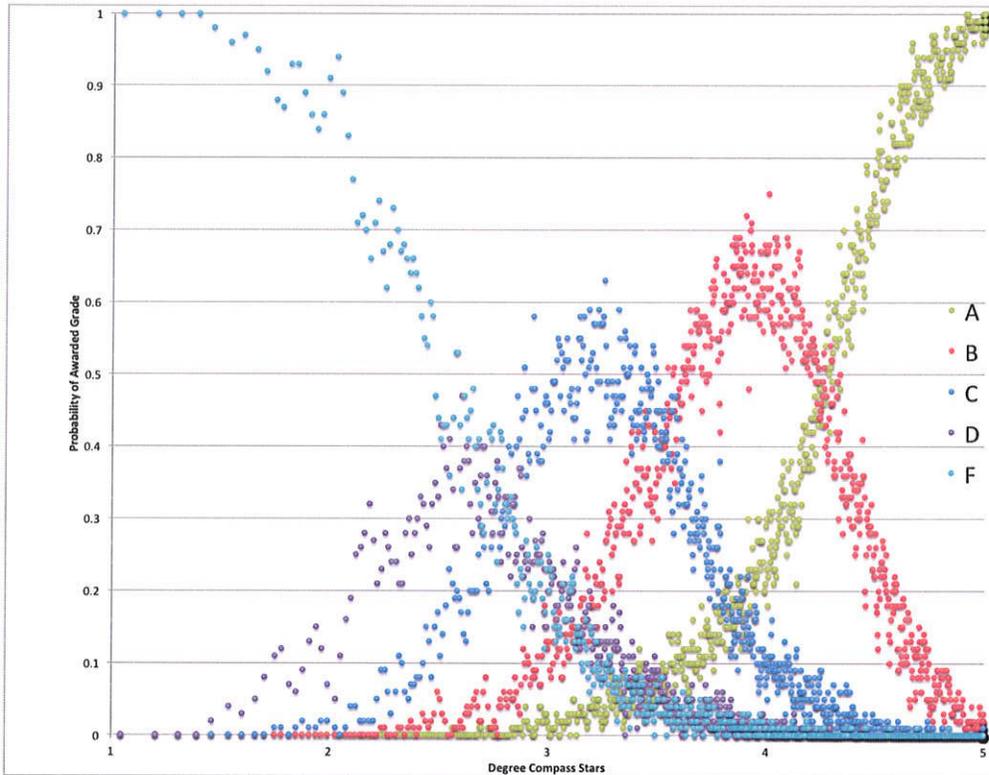
1000-level	Overall	4star	<4star
A	31.9%	64.2%	4.2%
AB	56.1%	92.9%	24.6%
ABC	70.6%	95.7%	49.0%

2000-level	Overall	4star	<4star
A	33.6%	62.4%	5.4%
AB	62.0%	94.2%	30.5%
ABC	77.7%	98.1%	57.8%

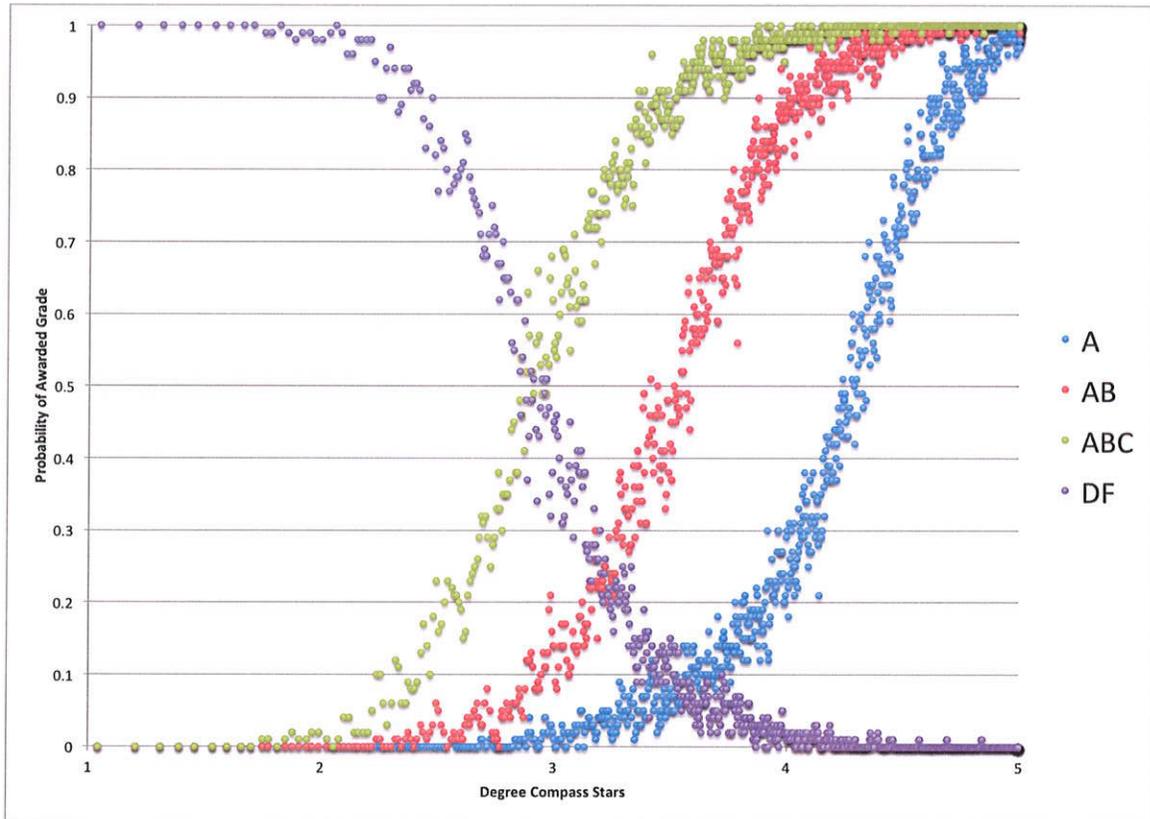
3000-level	Overall	4star	<4star
A	37.9%	64.6%	7.2%
AB	66.9%	93.8%	36.0%
ABC	83.3%	97.8%	66.6%

4000-level	Overall	4star	<4star
A	47.0%	64.4%	7.8%
AB	76.9%	93.3%	40.1%
ABC	88.5%	96.9%	69.6%

At APSU we have done some significantly more detailed analysis of the grade prediction model.



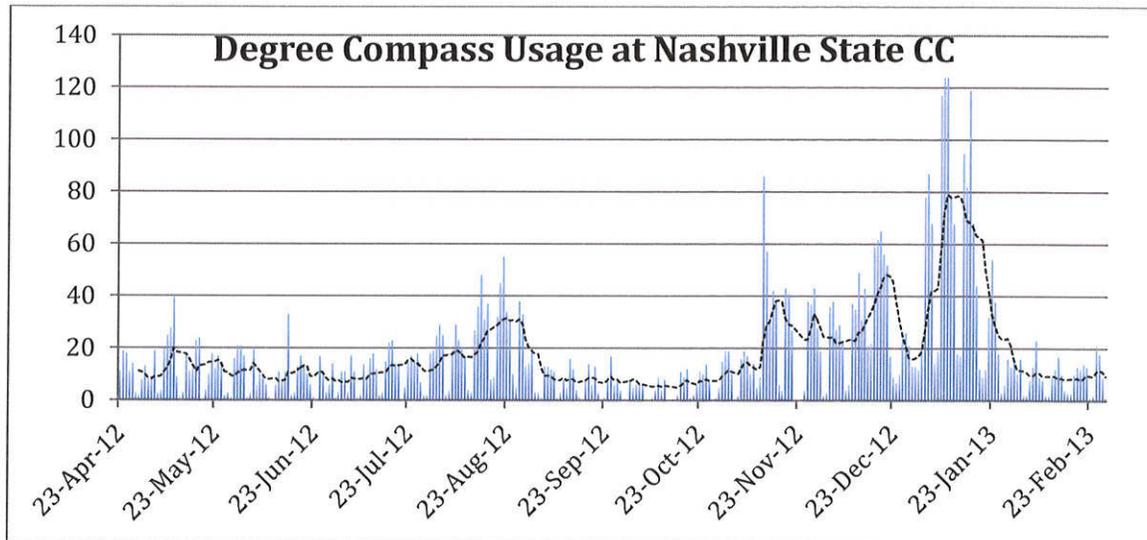
This new technique has increased the predictive resolution of predicted and awarded grades differing by .6 on average to .4.



What is more rather than the system correctly predicting if a student will pass the class with 90% accuracy, the new system correctly distinguishes if the student will get an ABC or a DF with 92% accuracy.

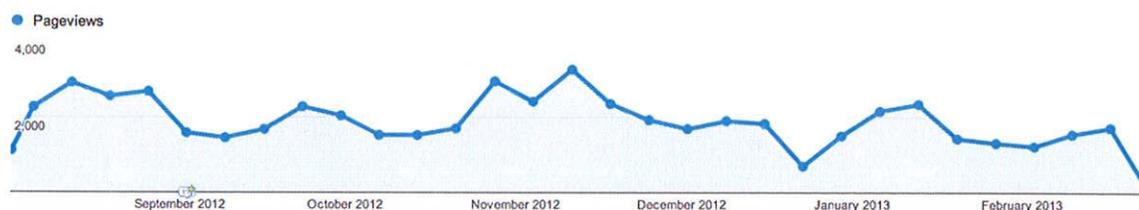
This new grade predictor will be implemented across the system this spring. It is already being used this spring at APSU to investigate the efficacy of a new intervention for students who are predicted to perform poorly in Anatomy and Physiology.

The data at the replication sites has been able to establish that the grade prediction technique is equally effective at the all of the replication sites, even across the differing student bodies at community colleges and universities.



The above chart shows the visits to the Degree Compass interface at Nashville State. From the initial launch in April there has been a steady increase in usage activity. Important features are the increased usage surrounding three calendar periods: the start of the Fall semester at the end of April; planning for and enrolling in spring schedules at the end of October and during November; and the start of the spring semester at the end of January. These usage increases and the general growth in web-visits seem to confirm that students at NSCC are increasingly turning to Degree Compass as an information source.

At APSU student use of Degree Compass is becoming more and more embedded into the culture. The Google Analytics traffic shows peaks of activity just before the start of the fall semester and at the advising for the spring semester in November.



Degree Compass was listed by the student newspaper – the

Allstate – as one of the top 10 most influential events in 2012. A fall survey of 1000 students showed that 55% said that they were aware of Degree Compass. Of those that had heard of the system 60% said that they had used it, and 86% said that they felt the system produced an accurate prediction of their academic success. 94% said that they would recommend the system to a friend. The users were 52% first generation students and 62% Pell recipients. We will continue to increase awareness of Degree Compass in the lead up to spring advising.

At APSU the data is mature enough to be able to establish the effect of utilizing Degree Compass advice. When ABC% were compared between Fall 2010 and Fall 2012 we saw an increase of 1.4% which represents a 5.3 standard deviation shift. This very statistically significant shift was also apparent for several subpopulations including African American students (increase of 2.1%, 2.89 standard deviations) and Pell recipients (increase of 3.9%, 7.7 standard deviations)

Work is now well under way to add three additional replication sites at University of Tennessee Chattanooga, East Tennessee State University, and North East Community College. On campus visits to these campuses will take place in early March, but these on campus visits are largely to help spread information to the faculty at these other campuses. There have been several video conference meetings with the IT staff to deal with the technical work of replicating the system. Each of these sites uses the Degree Works degree audit system used by University of Memphis, and so replicating at these sites entails creating a universal solution to interface with this auditing system developed from the purpose built solution for University of Memphis. This development work is in its final stages. Progress is still on track to allow students at these three additional sites to use Degree Compass to aid their selection of their fall and summer schedules.

At each replication campus we are now tracking Google-analytics web-traffic data of Degree Compass. We also track each student's predicted and earned grade in each class in their schedule in each semester. Once creating a course schedule is added to the Degree Compass interface we will have the additional ability of definitively analyzing how Degree Compass influences course selection at the point of decision.

The MyFuture majors recommendation system was launched on Austin Peay's campus in November 2012. Since then students have made more than 9600 unique visits to their MyFuture page. More granular Google-analytics tracking has been recently added to capture when a student changes their major through the MF interface. The MyFuture suggestions has also been used as part of a redirect advising initiative at APSU. This initiative involved 100 students who had already made failing grades in coursework critical to successfully completing their current major. Each student was contacted and received a face-to-face meeting in which their moving to a MyFuture major in which they were forecast to be more successful was discussed. All students have now moved to a new program of study.

Work is now underway to replicate MyFuture at each of the original three replication sites. The timetable is to have this work completed by the end of the spring semester.

Why IT Matters to Higher Education

EDUCAUSEreview online

Austin Peay State University: Degree Compass

by *Tristan Denley*

Published on Wednesday, September 5, 2012 | 0 Comments

*This case study from the EDUCAUSE book *Game Changers* describes the Degree Compass course recommendation system implemented at Austin Peay State University. The system advises students on the courses that suit their demonstrated talents and fit their chosen program of study. As author Tristan Denley explains, Degree Compass combines hundreds of thousands of past students' grades with each current student's transcript to make individualized recommendations. The strongest recommendations are for courses a student needs to graduate, that are core to the university curriculum and the student's major, and in which the student is predicted to succeed academically. This type of academic advising can facilitate a student's success in the chosen degree program and shorten time to degree completion and thus the costs of higher education. Degree Compass is succeeding at Austin Peay, and the model may benefit other higher education institutions as well.*

In this video, the author explains Degree Compass.

— *Diana Oblinger, President and CEO, EDUCAUSE*

Students entering higher education face the sometimes daunting task of navigating their way through a degree program. Confronted with a wide array of course options that could satisfy degree requirements, which is the best way to success? In what order should the courses be taken? Course descriptions often give few clues about what the course will entail, containing instead many technical terms that are introduced in the course itself. Advisors are well equipped to provide valuable advice in their own field. But most programs require students to take courses from across the full spectrum of the university, and advisors find themselves challenged to offer useful advice in disciplines far from their own.

All of this assumes that the student has chosen a major that is a good fit. In fact, a sizable proportion of students begin their college career undecided or in a major that they later realize is not what they expected. Complete College America recently reported that students on average take up to 20 percent more courses than are needed for graduation—not because of desire for a diverse curriculum, but because they had to rethink their plans several times. In an environment in which time to degree has considerable implications for a student's likelihood of successfully graduating, a semester of extra coursework plays a crucial factor.

What seemed to be needed was a system that could use the perspective of the past to begin a better-informed conversation between student and advisor. This system would allow advisors and students to make plans for future semesters, equipped with data on courses or even majors in which past students with similar programs, grades, and course histories had found success.

Degree Compass System: How It Works

Inspired by recommendation systems implemented by companies such as Netflix, Amazon, and Pandora, Austin Peay State University (APSU), in Clarksville, Tennessee, developed a course-recommendation system called Degree Compass that successfully pairs current students with the courses that best fit their talents and program of study for upcoming semesters. The model combines hundreds of thousands of past students' grades with each particular student's transcript to make individualized recommendations for current students.

This system, in contrast to systems that recommend movies or books, does not depend on which classes students like more than others. Instead, it uses predictive analytics techniques based on grade and enrollment data to rank courses according to factors that measure how well each course might help the student progress through a chosen program. From the courses that apply directly to the student's program of study, the system selects those courses that fit best with the sequence of courses in the student's degree program and are the most central to the university curriculum as a whole (see Figure 1). That ranking is then overlaid with a model that predicts the courses in which the student is most likely to achieve the best grades. Through this method, the system makes its strongest recommendations for courses that are necessary for a student to graduate, that are core to the university curriculum and the student's major, and in which the student is expected to succeed academically.

Figure 1. Degree Compass

The screenshot displays the Degree Compass web interface. On the left, a sidebar shows details for 'BIOL 1010: Principles of Life', including a course description, a note about prerequisites, and class section information for Spring Semester 2011 (Class Section: 01). The main content area is titled 'Courses You Should Consider:' and lists several recommended courses with star ratings and 'View Sections' buttons. The courses listed are: BIOL 1010 - Principles of Life (5 stars), BIOL 1011 - Principles of Life Lab (4 stars), GEOL 1041 - Physical Geology Lab (4 stars), BIOL 2011 - Human Anat and Phys Lab (4 stars), and GEOL 1040 - Physical Geology (4 stars). Below the list is a filter box containing 'MATH, ENGL, etc.' and a note about suggestions based on other students' progress. On the right, there are sections for 'My Courses' and 'AP Online' with login instructions.

Each student's recommended course list is conveniently displayed in a web-based interface on the secure side of the university portal. This interactive interface provides information on each recommended course's curriculum and requirements and what role that course plays in the student's degree program, as well as class availability in upcoming semesters. This same information is also available on PeayMobile, the APSU mobile application (see Figure 2). Faculty advisors can access Degree Compass as a tool for academic advising to supplement the material available to faculty

members when they provide advice to their advisees.

Degree Compass also provides a number of enterprise-scale reports that provide strategic information to department chairs and advisors. These reports provide data that enable targeted interventions. For instance, one report allows the institution to enhance its Early Alert System at the outset of the semester by using projected course grades to identify students who would benefit from tutoring support or academic mentoring.

Does It Work?

The main factor in student success and progression lies in the system's ability to place students in courses in which they will be most successful. Faculty and students both welcome the additional information and interact comfortably with the interface.

The grade-prediction model provides an accurate estimate of the final grade a student is likely to receive. When the model's predictions are retrospectively compared with real student grades, we found that 90 percent of the time the model correctly predicted courses in which students would achieve a C or better—on average, it was able to successfully predict grades of C or better to within 0.56 of a letter grade. Moreover, when students' actual grades from their semester courses were compared, grades in courses that were recommended averaged 0.46 of a letter grade better than those in courses the system did not recommend to the student.

Challenges Faced

The main challenge with this system was creating a mathematical model to successfully estimate a student's future grades to an acceptable tolerance, based on the student's transcript and the university's legacy grade data. A secondary challenge was designing a system to sequence courses in a natural order, based on both a given major and the university curriculum as a whole. Once these models were designed and tested, the system then had to be taken to full scale, seamlessly interacting with APSU's course management system.

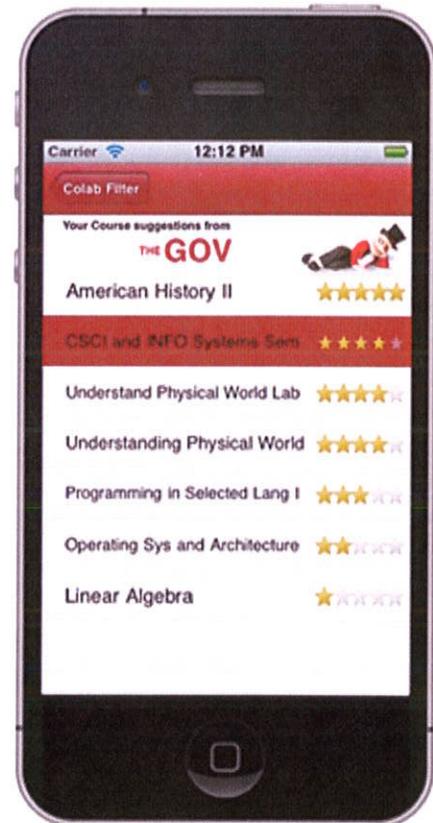
Course selection is crucial to student success, but so too is the choice of major. The APSU team is currently refining a feature that will allow Degree Compass to suggest majors based on each student's academic record and predicted future grades. We hope that this will be implemented at APSU later this spring.

Can It Work Elsewhere?

As APSU explores replicating Degree Compass at other institutions, the challenges of interfacing with other computer systems and adapting to the curriculum structure of other institutions remain to be fully resolved. Recently, the system played a central role in Tennessee's successful Completion Innovation Challenge application, which received a \$1,000,000 award from Complete College America and the Bill & Melinda Gates Foundation to support implementation of Degree Compass at three other campuses in Tennessee—one university and two community colleges. Students, advisors, and administrators at these sister institutions in Tennessee will be able to use the system's features in spring 2012 to create schedules for fall 2012.

One of the major challenges in higher education today is to influence student success, progression, and graduation

Figure 2.
Degree Compass on
Mobile Device



statistics. If we are to meet President Obama's commitment to having the highest proportion of students graduating from college in the world by 2020, we will need to be able meet this challenge. This system is already making an impact at APSU, and the results from the replications to three other campuses this spring will show how effectively it might be a factor on other campuses. It is our hope that in 2012 we will be able to implement Degree Compass at other universities and community colleges across the nation.

Tristan Denley earned his Ph.D. in Mathematics from Trinity College Cambridge and held positions in Europe and North America before becoming Provost at Austin Peay State University in 2009. His work implements a wide variety of college completion initiatives, spanning pedagogy redesign and the role of predictive analytics and data mining in higher education.

© 2012 Tristan Denley



Tristan Denley

Dr. Tristan Denley earned his PhD in Mathematics from Trinity College Cambridge, and held positions in Europe and North America before becoming Provost at Austin Peay State University in 2009. His work focuses on implementing a broad spectrum of college completion initiatives, spanning pedagogy redesign to the role of predictive analytics and data mining in higher education.

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Degree Compass: A Course Recommendation System

by *Tristan Denley*

Published on Wednesday, September 4, 2013 | 0 Comments

Key Takeaways

- To **successfully match students with courses** suited to both their talents and academic goals, **Degree Compass combines data** on a student's **past grades** with **transcript information** from thousands of other students.
- In addition to **student- and advisor-facing interfaces**, Degree Compass provides a **variety of reports** that help the institution **optimize course schedules** and offer **targeted support to at-risk students**.
- Degree Compass is **now in use at other institutions**, and its predictive modeling techniques have **proven effective across broader student populations** and curricular structures.

As a regional institution at which more than 40 percent of the students are nontraditional learners and more than 50 percent are Pell recipients, Austin Peay State University (APSU) has many students who are unfamiliar with the subtleties of navigating their way through a degree program. Although each APSU student meets with an advisor each semester, the choices involved in constructing a successful curriculum are still difficult. We thus decided to create Degree Compass, a choice architecture powered by predictive analytics, to help students make advantageous and informed choices about their education.

The challenges that Degree Compass were designed to solve are widespread across higher education. With support from the Bill and Melinda Gates Foundation and Complete College America, Degree Compass has been replicated at three other Tennessee institutions in the past year. These replications have provided significant data to demonstrate the effectiveness of the architecture's predictive modeling techniques when applied across broader student populations and curricular structures.

Degree Compass Described

Inspired by recommendation systems implemented by companies such as Netflix, Amazon, and Pandora, Degree Compass successfully pairs current students with the courses that best fit their talents and program of study for

upcoming semesters. The model combines hundreds of thousands of past students' grades with each particular student's transcript to make individualized recommendations.

In contrast to systems that recommend movies or books, Degree Compass does not depend on which classes are more popular than others. Instead, it uses predictive analytics techniques based on grade and enrollment data to rank courses according to factors that measure how well each course might help students progress through their own degree programs. From the courses that apply directly to the student's program of study, the system selects those courses that fit best with the course sequence in their degree and are the most central to the university curriculum as whole. That ranking is then overlaid with a model that predicts the courses in which each student will achieve the best grades. The system most strongly recommends a course that is necessary for a student to graduate, that is core to the university curriculum and the student's major, and that the student is expected to succeed in academically.

Loretta Griffy, director of the APSU Center for Teaching and Learning, explains the benefits to faculty and students of Degree Compass (1:16 minutes).

The system deliberately provides information facing in three directions:

- A student-facing interface presents course choices in an appealing and informative way.
- An advisor-facing interface provides information to advisors that lets them offer more nuanced advice to their students.
- An array of reports allow the institution to aggregate recommendation data and use it to optimize future class schedules; the data also provides early alert information on students who are at risk of performing poorly in their courses so that the institution can target support accordingly.

Mark Gray, advising coordinator at APSU, talks about how advisors can use Degree Compass to guide student career choices (1:08 minutes).

Refinements to the Implementation

Degree Compass has been providing information to students and APSU since its initial deployment in spring 2011. Since then, the interface has seen many important refinements.

The course recommendations for students (and their advisors) are now categorized according to the unmet degree requirements that they would satisfy. Students and advisors can now see at a glance the student's outstanding academic requirements and which courses would be most advantageous.

Many students pursuing degrees in higher education today are also juggling family or job responsibilities. Constructing a schedule that allows students to both meet these significant external obligations and make effective academic progress is a challenge using traditional methods. Degree Compass now provides search filters that let students and advisors find the courses that simultaneously best fit any practical constraints while also maximizing programmatic and academic success.

APSU student McCartney Andrews explains her use of Degree Compass (36 seconds).

As noted, Degree Compass has been installed at three other institutions in Tennessee — one university and two community colleges — and is thus in use at schools with a broad cross-section of curricular structures and student populations. These schools are each at different stages of campus-wide implementation, but their data offer us an opportunity to further refine the predictive modeling as well as to increase the interface functionality to meet the needs of different institutional settings.

Also, Degree Compass was recently acquired as part of Desire2Learn's portfolio of predictive analytics and student success products. Degree Compass is now available as a commercial product for installation on a wide variety of campus or system settings.

New Challenges in Scaling Degree Compass

The initial experiences and challenges with creating Degree Compass are described in a section of the EDUCAUSE e-book, *Game Changers*.¹ The main initial challenge was to create a mathematical model to successfully estimate a student's future grades to an acceptable tolerance based on their transcript and grade legacy data. A secondary challenge was to design a sequencing system to order courses in a natural sequence, based on both a given major and the university curriculum as a whole. Once these models were designed and tested, the system then had to be taken to full scale, seamlessly interacting with APSU's CMS.

More recently, we have been extending Degree Compass from a single-institution system to one that can seamlessly interface with the technology in diverse institutional settings. This has required additional functionality to respond to the variety of needs that arise on different campuses. For example, Degree Compass now provides filters to allow students to identify the courses that best fit them that are available at specific branch campus locations or in a specific course delivery method.

We have also faced the technical challenges of working in different technology settings. These challenges have included working with a variety of degree audit systems and curricular structures. The solution required new interfaces to be developed so that Degree Compass could interact seamlessly with campus CMS and degree audit settings.

Having addressed both types of challenges, the Degree Compass system can now function in different environments and in a multiple institution setting.

Results

Although our initial predictive results at APSU were very encouraging, it was important that we establish that our modeling techniques could calibrate themselves to differing institutional settings and student populations.

Happily, the results from all three campuses replicate the ongoing grade prediction resolution achieved at APSU. Data from fall 2012 showed that the average predicted grades in the university settings were within .5914 of the awarded grades, and 89 percent of those who were predicted to pass the course indeed passed. In the community college setting, average predicted grades were within .6487 of the awarded grades, and 90 percent of students who were predicted to pass the course did so. These results confirm that the grade prediction engine successfully predicts grades in diverse settings, from a rural community college to an urban research 1 university.

The grade distributions across all the campuses, of all students, showed a picture in which a student had a 0.62 to 0.63 probability of getting an A or a B grade in their course. A more detailed analysis of the connections between the grades predicted by Degree Compass and actual earned grades showed that students at all four campuses who were predicted to earn a B or above had a significantly greater likelihood than this of actually getting that grade. Indeed, at each campus more than 90 percent of students who took a course in which they were predicted to get at least a B actually earned an

A or a B grade. The analysis shows that this effect was evidenced at every school and at every course level from developmental classes through upper-division courses.

Further, more detailed analysis of the grade prediction model at APSU let us improve the resolution of the grade predictions. Also, rather than correctly predicting if a student will pass the class with 90 percent accuracy, the new analysis correctly distinguishes if the student will get either an ABC or a DF with 92 percent accuracy.

Of course, the motivation behind this work was not to predict grades, but rather to provide a choice architecture in which students and advisors could make more nuanced decisions about degree programs. To this end, our hope is that, when students follow Degree Compass advice, they will be more successful.

At APSU, the data is mature enough to establish the effect of following Degree Compass's advice. When ABC percentages were compared between fall 2010 (the semester before the system's introduction) and fall 2012, we saw an increase of 1.4 percent, which represents a 5.3 standard deviation shift. This very statistically significant shift was apparent across the student body, from freshmen to seniors. We saw similarly significant increases for several subpopulations, including African-American students (an increase of 2.1 percent, with 2.89 standard deviations) and Pell recipients (an increase of 3.9 percent, with 7.7 standard deviations).

Degree Compass was created as an attempt to use predictive analytics to improve student success and completion. It now seems clear that, across the institution spectrum and student population range, it has the promise to do just that.

Note

1. Tristan Denley, "[Austin Peay State University: Degree Compass](#)," *Game Changers: Education and Information Technologies*, Diana G. Oblinger, ed. (Boulder, CO: EDUCAUSE, 2012).

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