Daniel J. Klaich
Chancellor
Nevada System of Higher Education
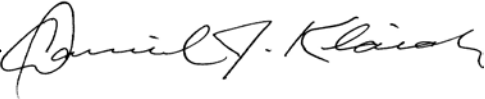
4300 S. Maryland Parkway	**2601 Enterprise Road**
Las Vegas, NV 89119	**Reno, NV 89512-1666**
Phone: 702-889-8426	**Phone: 775-784-3222**
Fax: 702-889-8492	**Fax: 775-784-6520**

MEMORANDUM

DATE: November 3, 2014

TO: NSHE Board of Regents

FROM: Daniel J. Klaich, Chancellor

COPY: NSHE Presidents
             NSHE eLearning Task Force
             NSHE Faculty Senate Chairs
             Chancellor's Cabinet

RE: eLearning – Phase One Directives

Introduction

The purpose of this document is to outline my directives for implementation of the Phase One recommendations of the eLearning Task Force.

Background

In August 2012, the Nevada System of Higher Education (NSHE) contracted with Richard N. Katz & Associates (RNKA) to look at eLearning within NSHE with a view to identifying alternative strategies for enhancing student success, educational opportunity and access, and promoting student centeredness through eLearning.   Out of this effort came a report, presented to the NSHE Board of Regents at its March 2013 meeting: *eLearning and Higher Education's Iron Triangle: Opportunity, Affordability, and Student Success at NSHE.* At that meeting, the Board accepted the Katz report and directed the Chancellor to pursue the 16 recommendations contained in the report.

In response to this charge, I convened an ad hoc NSHE eLearning Task Force. Before going any further, I would like to commend the eLearning Task Force for its excellent work on these initial Phase I recommendations. The Task Force established the consensus needed on a number of issues to move forward with implementation of the recommendations of the Katz report. I would like to thank Dr. Mark Fink, who served as co-chair of the Task Force, and Ms. Nancy Flagg, who staffed the Task Force and kept us focused and on task.

When I first issued the charge to the eLearning Task Force, I outlined the work to be accomplished in three phases. The first phase was to deal with remediation; the second with

eNcore (a plan for NSHE to offer online general education courses System-wide); and the third with evaluating and prioritizing the remaining recommendations of the Katz report not otherwise addressed in Phases 1 and 2. I directed the group to begin Phase I by considering approaches and technologies that utilize eLearning in the support of remediating students in a timely and effective fashion. National metrics indicate good reason to focus early efforts on remediation and the corresponding transition to "gateway" credit courses that build upon successful remediation. Student success in gateway mathematics courses is a strong indicator of a student's likelihood to persist and ultimately graduate. Remediation rates for NSHE students in mathematics continue to be unacceptably high, and despite the successes of the Remedial Transformation Project and the Gateway Course Success Summit, more work remains to be done. These latter projects were also a key factor in the initial focus on remediation, as all these efforts fit together well in addressing our overall focus on student success.

The priorities and steps outlined in this document are a direct result of the work of the Task Force's work and resulting report, which is attached to this memorandum. There are four common aims that guide these recommendations: (1) common learning outcomes across all NSHE institutions; (2) increased access to higher education for Nevada students residing in rural Nevada; (3) increased enrollment options for students seeking online degrees that are offered 100 percent online; and (4) the implementation of efficacy measures to ensure that online education offered by NSHE institutions truly fosters student success.

Before moving to the specific directives, I want to acknowledge that this entire subject causes a great deal of angst in the System, particularly among faculty. Throughout the process, the four fundamental aims were emphasized. At every opportunity we were clear that this work was not about supplanting faculty involvement, which remains critical no matter what the method of delivery, but rather was about using tools at our disposal to increase options to students and to providing those options in a manner that students were telling us they wanted and in the way they wanted it. However, recognizing the faculty's concerns, I have chosen to move deliberately into this area.

Implementation of Phase I Charge

Based on the recommendations of the eLearning Task Force, the following steps will be taken to improve the offering of online learning opportunities and the use of online instructional materials for students in need of remediation in mathematics or English across the NSHE:

1. *Acquire System-wide Membership in NROC*

   The NROC Project (NROC) is a repository of on-line courses that are open and accessible to all. The project is funded by the William and Flora Hewlett Foundation, the Bill & Melinda Gates Foundation, and NROC member institutions across the country. It is a national K-20 cooperative project to impact college and career readiness through a focus on new models of digital content development, distributions, and use. In becoming an NROC member, NSHE will gain unlimited access to NROC content and systems, including the option to customize NROC's EdReady modules for remedial mathematics. This includes a variety of teaching resources, professional development resources, and direct support and access to a collaborative community. EdReady modules in mathematics are already available, and English modules are slated to become available soon (currently in beta testing). An added benefit of NROC membership is access to HippoCampus, a repository of high-quality, multimedia learning objects from The NROC Project, Kahn Academy, PhET, SIATech, and others. With membership, NSHE will get a custom version of the site, standards correlations,

and tech support. NROC membership could also allow access to Nevada's eleventh and twelfth grade students, essentially providing a tool to assist these students in better achieving college readiness.

2. *Contract with a Third-Party Vendor for Remedial English and Math Courses*

The recommendations of the eLearning Task Force included a minority opinion from UNR and TMCC to pursue immediately "off-the-shelf" remedial math and English courses. These two NSHE institutions have agreed to conduct a pilot in this area and will move forward with the adoption of remedial math and English courses from an established vendor. The chosen vendor model will include learning analytics -- a tool for the measurement, collection, analysis, and reporting of data about learners for purposes of optimizing learning outcomes. In addition, the chosen vendor must provide an "efficacy tool" that may be used to help understand how products or services can achieve their intended outcomes or results—in other words, it will measure the effectiveness of the adopted product. These courses would be made available to students as soon as possible, but no later than Fall 2015. All other institutions will have the option to participate in this initiative.

3. *Establish Corequisite Math Courses at all NSHE institutions and Establish Corequisite Placement Policy*

Corequisite (sometimes called stretch) courses allow for the placement of students who would otherwise be placed into a remedial course to instead be placed in a credit-bearing, college level course with extra credits to provide additional support to the student in areas where remediation is needed. The efficacy of this model has been demonstrated both nationally and, in Nevada, through the work of the University of Nevada, Reno. By Fall 2015, corequisite mathematics courses should be offered by each NSHE institution, both in the traditional classroom format and in formats that include online skills or tutorial support. To further ensure all NSHE students have access to these courses, the System will revise Board policy to establish clear and consistent scores for placement of students into corequisite courses, much like the policy already established that provides cut scores for placement into college-level courses. Through the support of Complete College America and the Dana Center, a faculty task force on gateway mathematics success has been created and will guide this work.

4. *Adopt a System-wide Learning Management System*

As soon as possible given current contractual obligations, all NSHE institutions will adopt a common online Learning Management System (LMS), which is the software by which online courses are delivered and managed. Currently across the System, two LMS are being utilized: Canvas and Blackboard. The adoption of a common LMS will benefit students as they transfer between institutions and do not have to learn a new software system each time, thereby limiting non-academic challenges they encounter when taking online courses. The LMS should be chosen with a consideration toward usage by Nevada K-12 institutions, in order to ease the transition from high school to college for students taking online classes. The adoption of a common LMS will benefit the System, students, and faculty in a number of additional ways, including more consistent and robust learning analytics; a faculty-created repository of online materials—videos, PowerPoint presentations, and assignments, to name a few—that can be shared across the NSHE; and greater collaboration across institutions (NSHE-wide research in online learning; team teaching,

etc.). A working group will be established to select a common LMS that will be implemented when existing contractual obligations expire.

5. *Develop a Common Registration Platform*

During visits to every NSHE campus, the eLearning Task Force learned from students that one obstacle to graduating on time is the ability to access required courses during the semester they are needed. When courses fill up at a student's home institution, that student should be able to easily enroll in the same course when it is offered at another NSHE institution, either on-line or at a nearby institution. The System will begin work on the development of a common registration platform. Under such a platform, students will be able to enroll for courses across the System without having to leave the home institution's web portal. This will better enable students to enroll in the courses they need, when they need them – ensuring on-time graduation. Establishing a common registration platform will further afford the opportunity for a broader student-centered conversation on the commonality of student data that can be used to support academic programs, student services, recruitment, and retention.
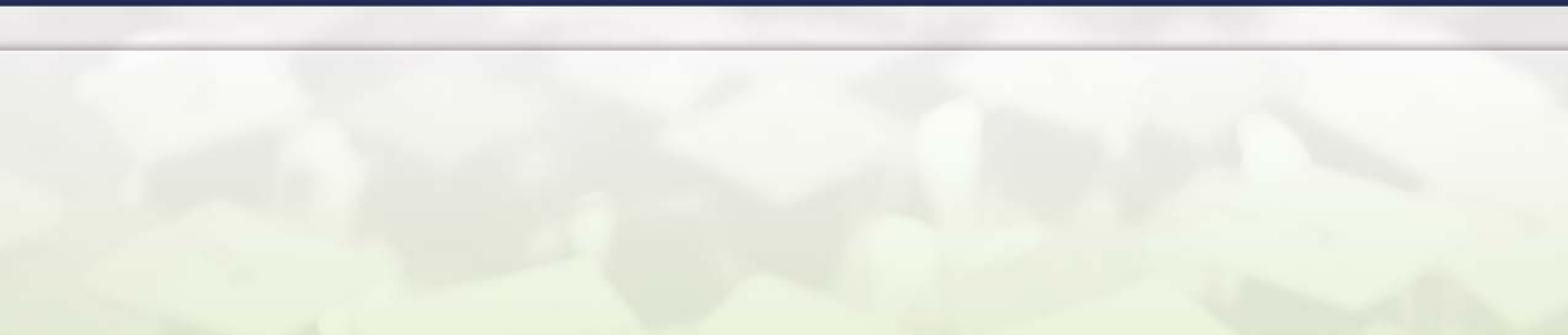
Next Steps – eNcore

Over the past eight months a sub-group of the Task Force has been working diligently on the next phase of the initial charge, namely development of an eNcore program, whereby the campuses would develop and deliver eNcore master courses for the general education curriculum. The sub-group is working to develop an education and business model, a program plan, and budget for the implementation of eNcore on-line gateway course offerings that will be transferrable to all NSHE institutions. Those recommendations are expected to be delivered to me later this year and will form the basis for a second set of directives.

Conclusion

In closing, I appreciate the dedicated work and collaboration of faculty and administrators throughout the System in helping fashion these directives. I look forward to continued collaboration as this important work moves to the next phase. I ask for all in the System to join me in implementing these directives for the benefit of NSHE and K-12 students statewide.

PHASE I REMEDIATION | SKILLS MODULES
NSHE E-LEARNING TASK FORCE

Table of Contents

A - NSHE E-Learning Task Force Members

B - NSHE Remedial Enrollments

C - Remedial Work Group Members

D - Task Force Communication Plan

E - Task Force Guiding Principles

F - Minority Position Memorandum

G - Citations/Bibliography

H - Draft RFP Components

PHASE I FINAL REPORT: REMEDIATION/SKILLS MODULES
NSHE E-LEARNING TASK FORCE

"It is often said that education and training are the keys to the future. They are, but a key can be turned in two directions. Turn it one way and you lock resources away, even from those they belong to. Turn it the other way and you release resources and give people back to themselves. To realize our true creative potential—in our organizations, in our schools and in our communities—we need to think differently about ourselves and to act differently towards each other. We must learn to be creative."

—**Ken Robinson,** *OUT OF OUR MINDS*

1. Introduction

At its March 2013 meeting, the NSHE Board of Regents received and accepted a comprehensive report prepared by Richard N. Katz & Associates: *E-Learning and Higher Education's Iron Triangle: Opportunity, Affordability and Student Success at NSHE*. The Board directed the Chancellor to develop and proceed with a plan for the implementation of the report's recommendations. In response to that direction, Chancellor Daniel Klaich created an ad hoc E-learning Task Force (Appendix A) charged with setting priorities, evaluating and pricing alternatives, and crafting an implementation plan per the Board's direction.

While the Richard Katz recommendations did not specifically address remediation, critical success metrics indicate good reason to focus early efforts on remediation and the corresponding transition to "gateway" courses that build upon successful remediation and are required for all degree-seeking students (Nevada System of Higher Education, 2014). For this reason, Chancellor Klaich charged the Task Force with initially examining options for improving student access to online remedial education in Nevada, which are presented in this report. A subsequent phase of the Task Force's charge will address improvements to online access to general education courses.

Access to remediation via e-learning is not simply a matter of having a computing device and Internet availability but also includes issues of affordability, operability, and capability to learn in a modality other than the physical classroom (Burbles and Callister, 2000). Too, as new technologies are created and applied to educational contexts, new pedagogical, or andragogical, approaches are reviewed and tested. E-learning professionals continue discovery by including not only the learning method with the technology but other forms of educational activity as well (Sharpies and Vavoula, 2007). NSHE should position itself with the capacity for long-term success by remaining current of e-learning developments on a regular basis.

2. Executive Summary

The NSHE E-learning Task Force's recommendations balance resource constraints with the need for urgent and impactful action in the Nevada System of Higher Education to assist the number of students currently requiring some form of remedial education (Appendix B). It should be noted that recommendations contained in this report reflect majority consensus and are not always reflective of unanimous positions among a Task Force of this size. Specific minority positions are reflected in Section 9.

After significant consultation from each campus and two work groups, the Task Force recommends the NSHE acquire statewide membership in NROC – a promising open-source, grant-funded consortium – and use NROC's customizable EdReady modules for remedial mathematics. This partnership will assist with systemwide expansion of co-requisite remedial courses, a teaching methodology that is increasingly viewed nationally as a best practice in remedial education. Additionally, the Task Force recommends acquisition of remedial math courses through a third-party vendor that would initially be piloted on a small scale at volunteer institutions. The Task Force suggests the NSHE consider using the remedial English customizable EdReady modules when available (these modules are currently in beta testing), which can be acquired at no additional cost to the System or students through NROC membership, as well as acquire third-party remedial English courses for small-scale piloting at volunteer institutions. All initiatives should be reviewed annually to measure student success and the project's efficacy.

The Task Force further recommends the adoption of systemwide learning outcomes for remedial English. Though the process of completing the Phase I charge, it became apparent that a statewide meeting of English faculty would greatly benefit remedial English efforts and provide a greater understanding of current and future e-learning capabilities within Nevada. Other facets of the Task Force's recommendations related to remedial education include an NSHE online course catalog, an NSHE e-learning materials repository, and the adoption of learning analytics.

Secondary initiatives addressed by the Task Force include recommending that Registrars and E-Learning Directors from each institution meet and work together to create a more student-focused admissions and registration process within the system. Students have reported to this Task Force the need for more seamless processes across institutions in order to enroll in an online course, particularly when they desire to enroll in one or two courses at other NSHE institutions when sections at their home school are closed. Not only does a more seamless process complement the new funding formula, it will reduce the frustration NSHE students encounter and allow them to graduate in a timelier manner.

Finally, the Task Force encourages all NSHE institutions to consider joining consortiums already established for e-learning, such as e-tutoring and e-proctoring services or products.

3. Phase I Charge

In September 2013, the Chancellor asked the NSHE E-learning Task Force to consider approaches and technologies that use e-learning in the support of remediating students in a timely and effective fashion. Specifically, the Task Force was charged with developing an education and business model, a program plan, and budget for the implementation of on-line and e-learning remedial modules in the two most frequently remediated areas of Mathematics and English. The recommended model was also to include suggestions for appropriate student support mechanisms.

It should be noted that intellectual property and e-textbooks were not part of the Phase I charge and, as such, were not discussed by the Task Force at any length, although they were raised as an issue during campus visits.

4. Task Force Methodology

Beginning in September 2013, the Task Force met on a monthly basis under the guidance of two co-chairs and a project manager. As a key element to involving faculty members in the crafting of recommendations to Chancellor Klaich, two work groups – one in Mathematics and one in English – were formed with members of the faculty from each NSHE institution who had experience in online teaching (Appendix C).

a. Work Groups

The remedial work groups began meeting in January 2014 and were charged with developing recommendations by March 31 for consideration by the Task Force. Considering all of the typical duties that faculty members must complete during a normal semester, the work groups were held to an especially aggressive schedule, and their work was invaluable to the final recommendations of the Task Force. The findings of each work group may be found in Section 5 and Section 6 of this report.

b. Faculty Engagement and Communication

As part of the overall methodology of the Task Force, it was important to maintain communication with NSHE faculty throughout the process. The delivery of effective online education raises numerous issues related to faculty development, intellectual property, student support mechanisms, and the like. In addition to forming the faculty work groups, the Task Force developed a communication plan (Appendix D).

Execution of the communication plan entailed full-day campus visits by Task Force Co-Chair Mark Fink to the University of Nevada-Reno, Truckee Meadows Community College, Western Nevada College in December 2013, Great Basin College in January 2014, College of Southern Nevada in February 2014, and Nevada State College in April 2014. During those visits, meetings were held with Faculty Senate leaders, Nevada Faculty Alliance members, students, distance education personnel, and college administrators.

Task Force Co-Chair Mark Fink also met separately with the following groups:
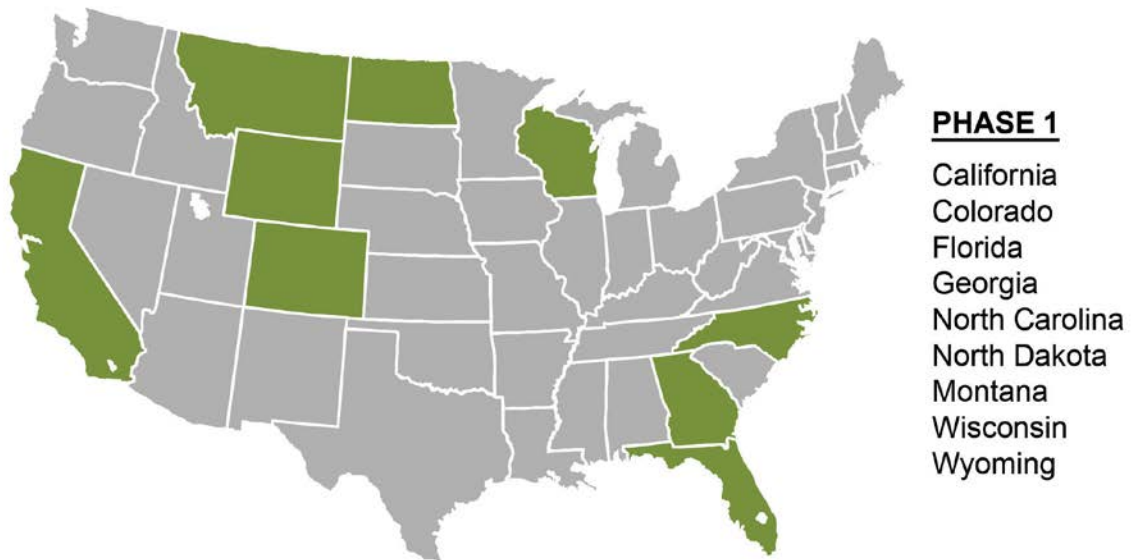
- UNLV Faculty Senate senior senators – February 4, 2014
- Board of Regents' ad hoc Committee on Institutional Service Areas – February 27, 2014
- UNLV Faculty Senate – March 25, 2014
- Nevada Faculty Alliance Statewide Board – March 28, 2014
- UNLV Graduate and Professional Student Association – April 7, 2014

c. Guiding Principles

As dialogue began with faculty members around the state, it became apparent that the Task Force would be well served if it developed a set of guiding principles as a means of ensuring that all constituents had a common understanding of how the Task Force would approach its charge. A set of principles was agreed upon and adopted in November 2013 (Appendix E). These principles were also communicated to the remedial work groups as a core piece of their assignments.

d. States Efforts and Online Products Studied

The Task Force and the two work groups conducted research on what other states are doing in the area of remedial education as well as examined a variety of courseware products and services as they considered options for potential adoption in Nevada. The following states and products were examined in detail:

PHASE 1

California
Colorado
Florida
Georgia
North Carolina
North Dakota
Montana
Wisconsin
Wyoming

Table 1: Vendor Products studied for remedial education

Vendor Products Studied	URL
P2PU (School of Open)	https://p2pu.org/en/
OpenLearn	http://www.open.edu/openlearn/
AdaptCourseware	http://adaptcourseware.com/
OdysseyWare	http://www.odysseyware.com/products/features/odysseyware-cctools/
Edmentum Plato Courseware	http://www.edmentum.com/products-services/plato-courseware
EdReady (NROC)	http://edready.org
HippoCampus	http://www.hippocampus.org
Pearson MyFoundationsLab	http://myfoundationslab.pearsoncmg.com/learn-about
Pearson CourseConnect	http://www.pearsonlearningsolutions.com/courseconnect/index.php
Pearson MyWritingLab	http://www.pearsonmylabandmastering.com/northamerica/mywritinglab/
McGraw Hill Connect	http://connect.customer.mcgraw-hill.com/about/
McGraw Hill LearnSmart Advantage	http://learnsmartadvantage.com/about/adaptive/
Bedford LearningCurve	http://www.bedfordstmartins.com/learningcurve/readwrite/109459/ECommerce/Unauthenticated
Global Student Network (GSN)	http://www.globalstudentnetwork.com/solutions.php
Straighterline	http://www.straighterline.com/
Knewton	http://www.knewton.com/
SmarterMeasures	http://www.smartermeasure.com/
Open Course Library	http://opencourselibrary.org/
Cengage Mindtap	http://www.cengage.com/mindtap/

5. Work Group Findings – Remedial Mathematics

a. Co-Requisite Model for High Placing Students

The Remedial Work Group recommended that stretch/co-requisite college-level courses (Math 116/120/124/126) be offered to students who place at the high end of the placement exam (cut level currently determined by institution), which indicates that a remedial math course is needed as the prerequisite for a college-level math course.

Example: Student scores 3 points below being placed into Math 126, therefore placing into Math 96 for a full semester. This student would be advised to enroll in the Stretch Math 126 course, which features a non-credit remedial component taken simultaneously with the credit-bearing class.

Co-Requisite Model Elements:

- Each institution determines cut score to be eligible to enroll in a stretch/co-requisite course.
- Institutions already offering stretch/co-requisite courses are to continue and track success.
- Institutions not using stretch/co-requisite courses would be asked to begin offering such courses and track success.
- Each institution would offer student support: tutoring centers, instructor assistance, student progress monitoring with early alerts to keep student on track.

- This model meets the criteria of completing college math during a student's first year of study.
- The current stretch courses are offered live on campus. The group did not discuss offering an online version at the present time, but one could be developed as the program continues to show a positive success indicator.

b. Online Model for Low-Placing Students

The Remedial Math Work Group recommended a fully online remedial course for students whose placement score indicates they are not ready for college math and do not fit the requirement for the co-requisite model. The framework for the online course would be developed and customized using vendor-provided and open source modules that would cover topics from Basic Math through Intermediate Algebra for all institutions.

> *Example*: The student has taken the institutional placement exam and placed into Math 91 - Math 96. This student would be advised to take a 7-8 week online remedial course starting in fall or be offered an option to take it prior to fall semester. The student would have the option of accelerating completion of the course.

NOTE: Based on its extensive research into efforts in other states and examination of available online products, the work group recommended that NSHE pursue membership in NROC, which provides open source modules to its members through a program called EdReady. Acquisition of EdReady modules may be possible through a sole-source arrangement, but in the event an open bid process is necessary to comply with NSHE purchasing policies, the Task Force has provided in Appendix H the preferred components for a Request for Proposal (RFP).

Online Model Elements:

- Each institution would develop a recommended path or number of modules to complete to prepare for the desired college level course. The recommendations would need to be readily available to students for review before enrolling.
- Instructors from each institution would build their program from the vendor-provided and open source modules by adding needed content, worked examples, videos, and practice problems and/or a third party homework platform.
- The exit exam would be the institution's placement exam. This would be the only proctored exam necessary for the program. If the student fails to place into a college-level course, further remediation is necessary. Three options would be available: 1) qualify for placement into a stretch/co-requisite course; 2) take a traditional, on-campus remedial course; or 3) sign up for more time in the online math-ready program.
- The online math-ready course would initially be intended for incoming freshman and made available to a broader scope of students after the program is tested and showing success indicators.

Program Objectives:

- Students who enroll, participate, and complete the online program will retake the appropriate placement exam and test into college level mathematics.
- Students that test into college-level mathematics after the online program will enroll and complete the subsequent college level course at a statistically comparable or better

level compared to a traditionally enrolled student.

Long Term Objectives:

- Achieve Quality Matters certification at each institution, as part of the Phase III recommendations.
- Students are able to purchase the online class in 8-week segments. If they do not complete the necessary modules, they can purchase another 8-week segment until they meet their goal and successfully place into college level mathematics.
- Online course is offered at any time during the year, on a monthly basis, allowing students to prepare and meet college math readiness as soon as possible.
- Actively pursue, create, and coordinate dual enrollment Algebra course(s) for credit to possibly replace the current 90 level remedial courses.

c. **Student Support**

The Remedial Math Work Group recommended that NSHE seek a statewide third-party vendor to provide student support for mathematics homework.

d. **Recommended Implementation Steps**

- Consult with content provider to prepare the specific modules for the online statewide math readiness program.
- Communicate with NSHE Mathematics departments and select online instructors to prepare and teach the course from each institution. Hold a collective training/introduction with the instructors before they start to prepare and teach.
- Have each institutional IT department work with the content provider to ensure integration within their LMS.
- Select a statewide, third-party homework provider (possible examples include McGraw-Hill [ALEKS], Pearson, Cengage, etc.) with specific provisions in the contract to ensure acceptable service and price savings to NSHE students.
- Market and coordinate the math ready program with the school districts (this needs to happen as soon as possible, because next year's seniors who are not ready for college math should already be identified or will be soon).
- Market and coordinate the program with all institutions, admissions, enrollment counselors, and all staff involved in counseling and enrolling incoming freshman.
- Cap enrollment for the online course at 25 to 35 students.
- Schedule, enroll, and teach the two to three courses during Spring 2015 for high school seniors and Summer 2015 for incoming college freshman.
- Meet with the instructors in Fall 2015 to discuss the program: advantages, disadvantages, what was good, what could be changed to improve. Review statistics.
- Track program students enrolled at Nevada institutions in Fall 2015 to determine their rate of success in college level math. Track these students through Spring 2016 if they do not enroll in a math course in Fall 2015.
- Revisit, review, and make recommended changes to the program with instructors after all data is gathered.

6. Work Group Findings – Remedial English

a. The Remedial English Work Group was not able to discover a fully online curricular product that it could recommend for statewide adoption. Rather, it found that the nationwide trend supports the use of co-requisite, college-level English classes combined with additional support mechanisms (additional advising, exercises, and contact time with instructors) instead of stand-alone remedial classes (Campbell, Brown, and Hickman, 2004; Goen and Gillotte-Tropp, 2003; Soliday and Gleason, 1997; Tinto, 1998). The work group recommended encouraging all institutions to expand their offerings of co-requisite classes as much as possible and to allow self-placement into these courses at the universities, regardless of test scores, whenever there is a reasonable expectation of student success. The work group noted that community colleges may need to continue to provide more placement guidance due to the greater diversity in preparation of incoming students. The work group recommended further study of NSHE data on existing remedial classes (both stand-alone and co-requisite enrollment) in order to determine which practices lead to measurable improvements (CCC, 2013).

b. For students who do need a stand-alone preparatory course, the Remedial English Work Group recommended exploring the development of systemwide Student Learning Outcomes for ENG 98 in order to improve consistency and articulation between institutions. The work group has begun collecting course descriptions from each institution and discovered much overlap but also some areas for additional discussion. This discussion will need to take place in the near future in order to aid institutions that are currently revising their curriculum and to allow time for any significant changes to be approved through the appropriate committees.

c. To support both of the preceding options, the work group will continue seeking to identify the types of digital technologies that are needed in order to make student support more available online. These include support for fully online classes, such as virtual proctoring or e-tutoring options. In some cases, the e-tutoring can be provided by the campuses – as is the case at UNR, where the new online ENG 98 initiative has built synchronous and asynchronous tutoring into the course development plan – but these resources are not unlimited due to staffing limitations and high demand. Based on current experiences at NSHE institutions, the Remedial English Work Group suggested that e-tutoring options should be offered but not required as part of the curriculum, unless students are given a specific task to accomplish during the e-tutoring session that will lead to measurable progress.

d. If NSHE should seek a packaged solution provided by a vendor, the Remedial English Work Group proposed:

   - That any system should be carefully piloted before there is an attempt at System integration. These pilot tests should collect data both on the success of students in the remedial courses and student success in the students' successive classes. The System should pilot these tests on a small scale.

   - That any vendor product the System wishes to pilot should be able to produce data showing improved student performance in a state with
     - a similar mission (land grant, massively publicly funded);

- similar student population demographics (particularly first-generation students, non-traditional students);
- roughly comparable resources;
- sensitivity to access issues associated with L2, Gen 1 & 1.5, ethnic diversity.

■ That any vendor product should meet the following criteria:

- The product must allow the instructor to customize assignments that lead to the required student learning outcomes. This is important to build community and connections within the class and allows a multi-faceted approach in assignment design to reduce the temptation of plagiarism (Heckler, 2012).

- The vendor must provide evidence of a record of technical support for both faculty and students.

- The content should be applicable to either stand-alone or concurrent (co-requisite) remediation.

- The product should work on multiple devices, including computers, tablets, and phones.

- The product must contain exercises that allow students to practice skills in context—for example, reading passages that ask students to "annotate" key elements of a digital text or editing exercises that allow students to apply editing skills in context of a paragraph.

- Instruction should help students make better use of tools already available in Word, Google Docs, and other common word processors as well as open source tools rather than making students dependent upon specialized tools within the product, which may not be available after the course is completed.

7. Task Force Recommendations

Taking into consideration the work group findings as well as broader Task Force discussions, the NSHE E-Learning Task Force makes the following recommendations for meeting Chancellor Klaich's charge to improve and expand access to online remedial courses.

REMEDIAL MATHEMATICS

a. The Task Force endorses expanding the Co-requisite Model for college-level, math-ready students who need some mathematics remediation. The Task Force further endorses a recommendation for all NSHE institutions to offer one or more co-requisite remedial math courses, ideally by academic year 2015-16.

b. The Task Force endorses moving forward with a customizable Online Model for not-ready-for-college-math students and for high schools students. This would be a fully online course paired with a homework application. Additionally, the content provider will allow access for any Nevada high school student in the 11th or 12th grade.

c. The Task Force recommends testing the Online Model on a small scale in 2015 before implementing statewide. (See a minority opinion arguing for broader adoption in Section 9, "Other Options to Consider," and more fully in Appendix F).

d. The Task Force recommends conducting a review of data for the Co-requisite Model and the Online Model to ensure efficacy of students' pass rate on gateway courses. A continuous improvement and efficacy review should be conducted at the 1 year, 3 year, and 5 year mark.

REMEDIAL ENGLISH

a. The Task Force endorses expanding the Co-requisite Model for college-level students who need some English remediation. The Task Force further endorses a recommendation for all NSHE institutions to offer one or more co-requisite remedial English courses, ideally by academic year 2015-16.

b. The Task Force endorses allowing the universities to enact self-placement into co-requisite English courses – regardless of test scores – whenever there is a reasonable expectation of student success. The Task Force notes that community colleges may need to continue to provide more placement guidance due to the greater diversity in college preparedness among their incoming student cohorts.

c. The Task Force endorses moving forward immediately with NSHE organizing a statewide group of English faculty to agree upon and adopt common learning outcomes for remedial English. The Task Force further endorses having statewide learning outcomes in place for remedial English by the beginning of the 2015-16 academic year. The Task Force recommends funding at least one face-to-face meeting of English faculty representatives from each institution, with additional meetings held via video- or web-conferencing.

d. The Task Force endorses implementing a high-quality, third-party, fully online option for remedial English in order to provide students with an immediate online option while other internal solutions and commercial products continue to be researched.

Although this recommendation does not concur with the English work group's analysis, after careful consideration a majority of Task Force members (see a minority view in Section 9, "Other Options to Consider") believe that a fully online option provided by a reputable third-party vendor should be made available as quickly as possible to any student wishing to avail themselves of this option, with the following rationale:

- It would add to the array of options for students, especially those who may be time-bound and place-bound.
- It provides an immediate solution to moving students through remediation in a timely manner so that they can continue with college-level course work and progress toward graduation.
- Students would continue to retain the option of taking remedial courses through face-to-face instruction and/or through co-requisite or hybrid models.
- The fully online option would start small at NSHE institutions volunteering to offer it.
- The fully online option would be evaluated after one year to determine if it should be expanded to other institutions.

- Content available through a contract with a reputable vendor can serve as supplemental content for other delivery models, such as co-requisite or hybrid courses that are customizable by the instructor.
- Enacting a piloted, fully online option would not interfere with NSHE pursuing and creating faculty-adaptable, co-requisite content through the suggested NROC membership and EdReady open-source modules.

e. The Task Force recommends testing the Online Option on a small scale in 2015 before implementing statewide. Further, should NSHE become an NROC member institution (as recommended by the Remedial Mathematics Work Group), the Task Force endorses allowing NSHE institutions to pilot the English modules in EdReady before any commitment is made for systemwide use.

f. The Task Force recommends conducting a review of data for the Co-requisite Model and the Online Model to ensure efficacy of students' pass rate on gateway courses. A continuous improvement and efficacy review should be conducted at the 1 year, 3 year, and 5 year mark.

8. Related Infrastructure/Policy Issues

The charge to the Task Force from Chancellor Klaich requested that the Task Force examine other issues related to improvements in online remedial education. As part of Phase I, the Task Force offers the following observations and recommendations. Additional detail and elements will be included at a later date as they specifically relate to Phases II and III.

a. **Registration improvements**

The Task Force recommends that NSHE request Registrars at each campus to work together on the development of a strategic plan designed to improve enrollment processes between NSHE institutions with a solution by FY 2016. While visiting students at every campus, the Task Force heard clearly from students that this is an obstacle to their graduating in a timely manner. The Registrars need to provide students an affordable and seamless admission/registration process and focus on the students' ability to enroll in courses across the NSHE, including remedial, developmental, and online education (Johnner, 2006). Inclusion of e-learning into enrollment management processes not only benefits NSHE students but also affords the System the capacity to adopt future e-learning approaches (Fekula, 2010; Oliver, 1999). The Task Force recommends funding at least one face-to-face meeting of Registrars and Distance Education Directors from each institution, with additional meetings held via video- or web-conferencing.

b. **Diagnostic assessment (placement, student readiness for e-learning)**

Research suggests that computer adaptive testing technology with cognitively diagnostic assessment provides information about a student's learning needs (McGlohen, and Chang, 2008). While there are many benefits of adaptive assessing and learning, the Task Force specifically focused on two areas where an adaptive diagnostic assessment would benefit students: 1) readiness for learning online and 2) a students' knowledge of math.

Online assessments are necessary in order to serve our rural stakeholders and all of our

students in a timely manner, and these assessments should be adaptive to get more accurate assessments of strengths and weaknesses. Additional aspects of an appropriate assessment tool would be the incorporation of online computer-adaptive components. The Task Force and associated work groups recommend that NSHE institutions make available to students a diagnostic instrument to determine if the remedial student has the capacity to be a successful online learner.

Additionally, feedback from members of the Task Force, work groups, and the NSHE community at large recommend a diagnostic assessment be acquired to provide a more focused determination of a student's math knowledge. There is a concern that some available instruments merely offer a score that is then applied to a cut score formula in order to determine course placement. Too often, these methods are based on too few items to be determinants of skill/procedural/and conceptual knowledge in an area. Additionally, the format is often solely multiple choice, which does not offer specificity or a fine enough picture of a student's thought. Rather than an instrument and format that does not take into account the identification of a student's strengths and weaknesses, some are looking for a solution that does offer a diagnostic (and even a prescriptive) approach that incorporates a remediation component (Tinto, 1993; Morris, Wu, and Finnegan, 2005).

c. **Tutoring and proctoring services**

NSHE already has a statewide contract for e-tutoring with SmarterThinking. It is optional for faculty to incorporate e-tutoring into their classes, and the Task Force endorses continuation of optional use.

The Task Force recommends that NSHE institutions procure e-proctoring services for students enrolled in remedial or developmental online education courses. Students who are enrolled in an e-learning course need to have access to instructional support services in addition to the instructor of record (Foster, Walker and Shearer, 2009; Case, 2009). As is the case with the SmarterThinking e-tutoring that is already available, individual institutions would have the option to use e-proctoring services in furtherance of a common approach, but faculty would not be mandated to incorporate such services into their classes.

d. **Data collection and management**

The Task Force recommends that NSHE collect data for all delivery modalities on remedial and developmental education in support of the Complete College America/NSHE Gateway Course Success Summit (NSHE, 2014). Data collected by the NSHE should be analyzed for remedial e-learning program success and shared with academic leaders at each institution.

Additionally, the Task Force recommends including data analytics where appropriate in any RFP, and further recommends that the Board of Regents (not the awardee of any RFP) should own all data that is derived from students or employees of the system.

e. **IT infrastructure improvements**

At this time, the Task Force does not recommend creating a centralized Help Desk for students and faculty, because current experience affirms that inquiries are too institution-specific and

course-specific for a centralized approach to work. In the future – perhaps in Phase II or III of future NSHE efforts to increase online course offerings in all areas (not simply remedial) – the Task Force recommends consideration of creating and supporting an online student lounge that would permit students to assist one another informally.

f. Materials repository

The Task Force recommends creating a faculty-driven, statewide e-learning repository of shared online content, modules, and curricular components. This is primarily valuable for the system and students' access to quality digital learning content for areas covered in Phase II and III of the charge. A repository can be created through the state selected LMS, on NSHE servers, or through an institution's computing infrastructure.

g. Online course catalog

The Task Force recommends creating and maintaining a comprehensive NSHE online course catalog. This catalog is essential to improving collaboration among NSHE institutions and to expanding student enrollments in e-learning courses.   With NSHE's new iNtegrate student information systems infrastructure, the NSHE has the capability to publish courses from the three SIS instances onto a web page by instruction mode. This allows students to see all courses in the system that are fully online or hybrid. An example of this functionality can be found at: http://online.unlv.edu/courses. Future versions of this can provide the capability of a faculty member to include additional information through a secure login, like their NSHE ID (e.g., required texts, special fees, field experiences, learning outcomes).

Future upgrades to the online course catalog should ideally have the functionality to display options at the student's home institution first. If all course sections at the student's home institution are full, then options throughout NSHE would be shown.

h. Learning analytics

Learning analytics are used at various levels across the globe, including within the NSHE system. Learning analytics are affording educators, students, and administrators the ability to use real-time student data for measuring performance. This can include remedial or at-risk students for early alert and intervention, for delivering personalized instruction, and in using adaptive pedagogies. Learning analytics can also be used to measure the success of academic programs from the student's perspective: their ability to earn a degree in a timely manner. For decision makers at all levels, learning analytics help to erode the uncertainty, clarify global competition, and assist with data-driven resource allocation decisions for today's systems of higher education (Siemens, G., and Long, P., 2011).

Learning analytics are proving vital to retention, progression, and completion efforts in online education. As the field moves beyond predictive analytics and begins to include behavior-specific data, the complexity and value to student success greatly increases (Johnson, Adams Becker, Estrada, and Freeman, 2014). Additionally, research shows that decisions based on evidence improves organizational output and productivity (Brynjolfsson, E., Hitt, L., Heekyung, H., 2011)

Within NSHE institutions, two primary levels of data collection are used: At the academic career level using Student Information System data (SIS) and at the course level, often through data supplied by the Learning Management System (LMS).

As Katrien Verbert of Eindhoven University of Technology, The Netherlands, states, "Learning Analytics is an old and new field at the same time. Old, because it deals with a problem that exists since Plato's times: how to improve the way students learn. New, because the tools used to achieve this goal, like Big Data and natural language processing, were not feasible merely 10 years ago."

The Task Force recommends that NSHE use learning analytics to assist in student success in all phases of improvements to online education. The strengths and opportunities of any new initiative can be measured for their success using the same data collection processes and analysis across the System. This will allow all institutions to work together in learning how to resolve higher learning issues across the state. As a step in this direction, NSHE could join the Predictive Analytics Reporting (PAR) Framework, a non-profit, multi-institution data mining collaborative offered through the WICHE Cooperative for Educational Technologies (WCET) http://wcet.wiche.edu/par/about

i. **Shared marketing**

As NSHE expands its online courses at all levels – and as it competes in the national marketplace with other states – it will be increasingly important to market NSHE e-learning options, courses, degree programs, and student support mechanisms to Nevada students. The Task Force recommends a minimal allocation for marketing costs as Phases I, II, and III are implemented.

9. Other Options to Consider

To ensure the NSHE is aware of all options available, the Task Force afforded each of its members an opportunity to provide a minority opinion from the primary recommendations. These recommendations are summarized below, and a formal letter related to paragraph B is provided in Appendix F.

a. **Alternative Math and English Pilot Project**. A minority recommendation was made for the NSHE to commit to a pilot project with Adapt Courseware in support of efforts to fully explore options for the successful completion of English and Math requirements. Some members believe this approach is ideal for adult learners since it assesses the current skills level of the student and tailors the curriculum accordingly. In addition, it is/can be more self-paced to accommodate work and family schedules. As with any other e-learning pilot efforts, the success of students using this approach should be monitored and regularly reviewed.

b. **Immediate Systemwide Adoption of Off-the-Shelf Courseware**. A minority recommendation advocates contracting with an external vendor, such as Pearson, in order to immediately make available to all students a fully online option for remedial courses (i.e., not merely a one-year pilot project at volunteer institutions). The Task Force members advocating this position recommend that the vendor be required to provide analytics on the effectiveness of the courses it offers. They also suggest that the primary recommendation for adopting adaptable

courseware should proceed but that an off-the-shelf product be used until such time as the other courses are piloted and their effectiveness is compared to the vendor product. See Appendix F for a memorandum containing the full text of this minority opinion.

c. **Remedial English: No Adoption of Third-Party Courseware.** Three members of the Task Force do not agree with the majority recommendation to move forward with adoption of off-the-shelf courseware in remedial English. This position holds that the current assessment of vendor products by the Remedial English Work Group should be honored.

10. Projected Costs and Funding Options

The following costs are rough estimates obtained from vendors using estimates for the total number of students that might be served through Phase I recommendations.

Purchase/Product	Estimated Cost	Notes on Estimated Cost	Reference to recommendation in report
Third-party Courseware for Remedial Math & English To establish fully online option for remedial courses. Cost includes all content delivery, tutorials for and tech support for students and faculty, homework management and evaluation system, and learning analytics to assess the efficacy of the course.	1,400,000	Estimate is based on scale of 20,743 potential users (i.e., current number of NSHE students requiring remediation per Appendix A) at approximately $69 per student. This cost would be indexed higher or lower depending on the actual number of students opting for the online-only option. For example, if only 4,000 students take the vendor's online remedial course, the cost per student could rise to approximately $99 per student ($396,000 per year)	Section 7 – Remedial Mathematics, item b. and Remedial English item d.
NROC Membership To create faculty-adaptable online content, with particular focus on co-requisite remedial courses. Cost includes access to EdReady modules in mathematics and English.	104,000	Estimate based on $1 per NSHE student using unduplicated Systemwide headcount. 11th and 12th grade students would be included at no additional cost.	Section 7 - Remedial Mathematics and Remedial English
Diagnostic Instrument: Online Learning Abilities	87,000	TMCC and NSC already use SmarterMeasures. Estimate is based on other NSHE institutions joining this consortium.	Section 8, item b
NSHE Online Course Catalog	0	Costs are limited to staff time.	Section 8, item g
Statewide English Committee to Develop Remedial Learning Outcomes	10,000	Travel costs for one face-to-face meeting of up to 2 faculty from each NSHE institution – other meetings held via video- or web-conferencing	Section 7 – Remedial English, item c.

Statewide Registrars Committee to Develop Registration Improvements for Online Courses	5,000	Travel costs for 1 face-to-face meeting of 1 Registrar and 1 DE Director from each institution – other meetings held via video- or web-conferencing	Section 8, item a
Shared Marketing	150,000	Costs are not exclusively devoted to expansion of remedial instruction; would include phase II and III	Section 8, item i
TOTAL PROJECTED COSTS, Phase I	$1,756,000		

Funding Options

The Task Force examined various options for funding the expansion of online remedial education but determined that many options were not practical in today's cost-conscious environment, such as seeking a legislative appropriation or increasing online course fees. As a result, the Task Force could only recommend three possible pathways to funding Phase I improvements:

1. **Self-supported funding of third-party courseware**. Students would pay the vendor directly for the remedial course and the vendor would report grades and data to the NSHE home institution.

2. **Campus assessments for NROC membership**. This could be done by either of two methods: an assessment of $1 per student based on the number of students taking remedial courses at each institution OR by dividing the $104,000 membership fee across the 6 degree-granting institutions ($17,000 each).

3. **Seek federal, state, or private grants** related to remedial education or to online learning more generally. There are several grant programs available that NSHE could apply for collectively or by institution.

APPENDIX A

NSHE E-Learning Task Force Members

Daniel Klaich, Chair	Chancellor
Mark Fink, Co-Chair	University of Nevada, Las Vegas
Erika Beck	Nevada State College
Caroline Bruno	Great Basin College
Kevin Carman	University of Nevada, Reno
Cynthia Clark	University of Nevada, Las Vegas *(Graduate Student representative)*
Paul Davis	Truckee Meadows Community College
Darren Divine	College of Southern Nevada
Lisa Frazier	Great Basin College
Christian Fritsen	Desert Research Institute
Richard Kloes	Western Nevada College
Fred Lokken	Truckee Meadows Community College
Terry Norris	College of Southern Nevada
Alex Porter	Great Basin College *(Undergraduate Student representative)*
Tony Scinta	Nevada State College
Jeffrey Wong	University of Nevada, Reno
Robert Wynegar	Western Nevada College

Project Manager
Nancy Flagg   Finishing Touches Project Management, Inc.

2013 NSHE Remedial Enrollments

**Recent Nevada High School Graduates Enrolled in Remedial Courses as a Percent of the
Total Number of Students Enrolled in Remediation**

	UNLV	UNR	UNIV. TOTAL	NSC	CSN	GBC	TMCC	WNC	COMM. COLL. TOTAL	NSHE TOTAL
Total number of students enrolled in remedial courses, labs/modules, or co-requisite courses at cohort institution	2,806	1,360	**4,166**	469	9,851	897	4,009	1,351	**16,108**	20,743
Recent Nevada high school graduates enrolled in remedial courses at cohort institution	1,531	626	**2,157**	158	1,527	148	650	250	**2,575**	4,890
Percent of total number of students enrolled in remediation accounted for by recent NV graduates	54.6%	46.0%	**51.8%**	33.7%	15.5%	16.5%	16.2%	18.5%	**16.0%**	23.6%

APPENDIX C

REMEDIAL MATH WORK GROUP
Group Lead
GBC -- Sheri Sanchez
Adjunct Instructor, Mathematics

Members
CSN -- Patrick Villa
Professor of Mathematics

NSC -- Aaron Wong
Assistant Professor, Mathematics

TMCC -- Maria Arrigotti
College Professor, Math Department

UNLV -- William Speer
Director, Math Learning Center

UNR -- Chris Herald
Director, Core Math Center

WNC -- Jeff Downs
Professor of Mathematics

DE Director/Task Force Liaison – Lisa Frazier, GBC

REMEDIAL ENGLISH WORK GROUP
Group Lead
UNLV -- Elaine Bunker
Assistant Director of Composition

Members
CSN -- Levia Hayes
Department Chair of English

GBC – Jessica Russell
Instructor, English

NSC – Gregory Robinson
Assistant Professor of English

TMCC -- Natalie Russell
College Professor, English Department

UNR -- Lynda Walsh
Director, Core Writing

WNC – Chad McCully
Professor, English

DE Director – Shannon Brown, UNR
Task Force Liaison – Caroline Bruno, GBC

APPENDIX D

E-LEARNING TASK FORCE COMMUNICATION PLAN
Adopted Nov. 20, 2013

The NSHE E-Learning Task Force will use multiple methods to communicate its work and progress to each NSHE institution. The purpose of the communication plan is to ensure transparency, to seek faculty feedback and address concerns, and to ensure that academic freedom is protected in any recommendations that may come forward from the Task Force. Additional methods of communication may be added as deemed appropriate.

Formal On-Campus Visits
Task Force Co-Chair Mark Fink will visit each campus at a time, setting, and format to be determined in consultation with the Task Force representative(s). After each meeting, Mark Fink will provide debriefing notes for the use of the Task Force.

Meetings with Distance Education Faculty/Staff
Task Force Co-Chair Mark Fink will arrange a separate meeting with each campus's DE faculty/staff when he is on campus for the formal visits noted above.

Informal On-Campus Discussions
Each Task Force delegation can meet formally or informally with campus constituencies as desired (example: TMCC has scheduled discussions 1-2 days after each Task Force meeting). The frequency and setting of these discussions will be left to the discretion of the delegation. Faculty concerns and questions from these discussions should be relayed to the Task Force.

Nevada Faculty Alliance Briefings
Periodic communications about the Task Force's progress – including publicity about campus visits and Town Hall meetings – will be arranged with the Nevada Faculty Alliance in whatever format the NFA prefers/recommends. These communications will be coordinated by the Task Force project manager.

Faculty Senate Briefings
Periodic communications about the Task Force's progress – including publicity about campus visits and Town Hall meetings – will be arranged through the respective Faculty Senates at each campus. These communications will be coordinated by the Task Force project manager. In addition, Task Force representatives are encouraged to provide periodic verbal reports/updates at their respective Senate meetings and to relay concerns and questions to the Task Force.

Nevada Student Alliance and GPSA Briefings
Periodic communications and meetings will be scheduled with student groups to keep them informed about Task Force recommendations and to seek student feedback.

Part-time Faculty Briefings
The Task Force recognizes that part-time faculty have a special interest in recommendations related to e-learning classes. The Task Force will invite part-time faculty to participate in formal on-campus visits.

Task Force Website
NSHE will establish a webpage for communicating basic information about the Task Force, for publicizing campus visits and Town Hall meetings, and for posting relevant documents that can be accessed by all interested parties. The website will be jointly managed by NSHE personnel and the Task Force project manager

APPENDIX E

TASK FORCE GUIDING PRINCIPLES

1. Does the recommended model promote greater inter-institutional collaboration in the area of online courses, certificates and degrees? Does it demonstrate innovation and strategic partnerships? Will it have a positive impact on student access?

2. Does the recommended model provide for increased efficiencies across NSHE and does it reduce redundancy of general education offerings among NSHE institutions?

3. Does the recommended model support increased degree completions in Nevada?

4. Does the program plan demonstrate a commitment to accessibility with Learning Management Systems (LMS), textbooks, and related technologies and services?

5. What available data demonstrate that the recommended program plan is likely to have a positive impact on student success? Are there meta-analyses or large-scale data sets suggesting that this strategy is likely to result in higher levels of student learning and satisfaction?

6. Does evidence suggest that the program plan is likely to have a positive impact on retention, progression, and completion for a particular student population (*e.g., adult students, underrepresented students, etc.*)?

7. Does the recommended model provide scalability across the NSHE while simultaneously allowing for clear mission differentiation across individual campuses and program specific learning outcomes as dictated by accreditation standards? (*An example would be an online learning preparation course where learning strategies could be system-wide, but unique aspects of each institution would be included as modules*).

8. Does the program plan demonstrate commitment to professional standards (*e.g., Quality Matters*) to ensure academic integrity, academic quality and consistency, and best practices?

9. Does the estimated budget demonstrate shared instructional technology resources and staffing across NSHE? (*An example would be a shared resource center that would make NSHE competitive with the Utah Educational Network and similar systems in California and Colorado*).

![University of Nevada, Reno logo]

28 May, 2014

To: Dan Klaich
        Chancellor, Nevada System of Higher Education

Thru: Mark Fink, UNLV

From: Kevin Carman, UNR
        Fred Lokken, TMCC
        Jeffrey Wong, UNR

Re: Minority opinion regarding remedial online education

As you know, the NSHE eLearning Task Force was charged with providing an NSHE-wide, online option for remedial education in math and English. You have received a majority report that recommends development of remedial online courses that would incorporate various resources. Under this plan, a team of faculty from NSHE institutions would develop the courses over a timeline that has not yet been determined.

We respect the opinion and recommendations of our colleagues, but would like to offer another option. Specifically, "off-the-shelf" remedial math and English courses are available through established vendors such as Pearson. These could be made available to students almost immediately. Should we decide to make use of commercially available courses, we could specify the requirement that the vendor provide analytics on the effectiveness of the courses. This would allow for comparison with current institution-specific courses.

Assuming that we also proceed with the committee recommendation to develop our own online NSHE-wide courses, we could drop the commercial classes when our own versions are ready, or we could compare the commercial classes with our own classes. It is also possible that blended courses will evolve that combine elements developed internally along with those from third party vendors.

Office of the Provost

Clark Administration, Room 110
University of Nevada, Reno/0005
Reno, NV 89557-0005
(775) 784-1740 main
(775) 784-6220 fax
http://www.unr.edu/provost

APPENDIX G

Citations/Bibliography

Brynjolfsson, E., Hitt, L., Heekyung, H. (2011). Brynjolfsson, E., Hitt, L. M., & Kim, H. H. (2011). Strength in Numbers: How Does Data-Driven Decisionmaking Affect Firm Performance? Social Science Research Network: Working Papers Series. Available at SSRN: http://ssrn.com/abstract=1819486

Burbules, N. C. and Callister, T. A., Jr. (2000). Watch IT: The Risks and Promises of Information Technologies for Education. Westview Press: Boulder, CO

Campbell, Trudy, William Brown, and Randall Hickman (2004). "Influences of Online Delivery on Developmental Writing Outcomes" Journal of Developmental Education 28 (1): 14-18, 35.

Case, R., & Cabalka, P. (2009). Remote proctoring: Results of a pilot program at Western Governors University. Paper presented at the 25th Annual Conference on Distance Teaching & Learning, Madison, WI.

CCC (2013). "A Position Statement of Principles and Example Effective Practices for Online Writing Instruction (OWI) (March 2013)" Available http://www.ncte.org/cccc/resources/positions/owiprinciples.

Fekula, M.J. (2010). And now let's really innovate: The notion of perpetual online courses. Accepted for presentation at and publication in the proceedings of the Association of Business Simulation and Experiential Learning 37th Annual Conference, March 24-26, 2010, Little Rock, AR.

Foster, D., Mattoon, N., Walker, P., & Shearer, R. (2009). Using multiple online security measures to deliver secure course exams to distance education students. Paper presented at the M-2009, The World Campus of Pennsylvania State University.

Goen, S., & Gillotte-Tropp, H. (2003). Integrating Reading and Writing: A Response to the Basic Writing" Crisis". Journal of Basic Writing, 22(2)

Heckler, N. C. (2012). *Mitigating plagiarism in large introductory courses in higher education.* (Order No. 3511023, The University of Alabama). *ProQuest Dissertations and Theses,* , 172. Retrieved from http://ezproxy.library.unlv.edu/login?url=http://search.proquest.com/docview/1022180355?accountid=3611. (1022180355).

Johnner, M.J. (2006, October) Financial aid strategies for maximizing distance learning enrollment: Speeding up the process for potential online students. *Global Financial Aid Services*. Retrieved March 7, 2010, from http://www.globalfas.com/news_20061001_finacialaidstrategies.htm.

Johnson, L., Adams Becker, S., Estrada, V., and Freeman, A. (2014). *NMC horizon report: 2014 higher education edition.* Austin, TX: The New Media Consortium.

Katz, Richard N. & Associates. (2013). *E-Learning and Higher Education's Iron Triangle: Opportunity, Affordability and Student Success at NSHE*.

Oliver, R. (1999). Exploring strategies for online teaching and learning. *Distance Education,* 20 (2), 240-255.

McGlohen, M. and H.-H. Chang (2008). "Combining computer adaptive testing technology with cognitively diagnostic assessment." Behavior Research Methods 40(3): 808-821.

Morris, L. V., Wu, S.-S., & Finnegan, C. L. (2005). Predicting Retention in Online General Education Courses. American Journal of Distance Education, 19(1), 23-36.

Nevada System of Higher Education (2014). Remedial Enrollments. Nevada System of Higher Education. Retrieved from: http://www.nevada.edu/ir/page.php?pid=remenrl

Nevada System of Higher Education (2014). Common Core State Standards. Data & Reports. Retrieved May 20, 2014, from http://www.nevada.edu/ir/page.php?pid=CCSS

Sharpies, M., Taylor, J., & Vavoula, G. (2007). A theory of learning for the mobile age. In R. Andrews, & C. Haythornthwaite (Eds.), *The sage handbook of e-learning research.* (pp. 221-248). London: SAGE Publications Ltd. Retrieved from: http://dx.doi.org/10.4135/9781848607859.n10

Siemens, G., & Long, P. (2011). Penetrating the fog: Analytics in learning and education. Educause Review Online, 46(5). Retrieved from Educause Review Online website: http://www.educause.edu/ero/article/penetrating-fog-analytics-learning-and-education

Soliday, Mary and Barbara Gleason (1997). "From Remediation to Enrichment: Evaluating a Mainstreaming Project" Journal of Basic Writing 16 (1): 64-80.

Tinto, V. (1993). Leaving college : rethinking the causes and cures of student attrition (2nd ed.). Chicago: University of Chicago Press.

Tinto, V. (1998, January). Learning communities and the reconstruction of remedial education in higher education. In Conference of Replacing Remediation in Higher Education, Stanford University.

Additional citations from work groups:

Johnson, Diana (2008). "Assessing Under-prepared Learners' Success in Remedial and College-Level Distance Learning Courses at a Two-year Community College." Dissertation, Univ. of Arkansas.

Means, et. al. (2010). "Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies." Dept. of Education. Available www.ed.gov/about/offices/list/opepd/ppss/reports.html

Stine, Linda J. (2010). "Teaching Basic Writing in a Web-Enhanced Environment" Journal of Basic Writing 29 (1): 33-55.

APPENDIX H

Nevada System of
Higher Education

Daniel Klaich
Chancellor

Request for Proposals

Nevada Remedial E-Learning Initiative

RFP#

Issued Date:

Table of Contents

Exhibits A, B, etc. (if needed)

SECTION 1
PROPOSAL PREPARATION

BOILERPLATE LANGUAGE PROVIDED BY BUSINESS CENTER NORTH

SECTION 2
STATEMENT OF WORK

A. Purpose of Proposal

The Nevada System of Higher Education (NSHE) is issuing a Request for Proposal (RFP) to procure, develop/customize, and implement a Nevada Remedial Education E-learning Initiative (NREEI) with the capability to offer selective remedial education online courses in Mathematics and English through online media for all Nevada students and other people who enter higher education institutions in Nevada.

The following links are offered for any interested companies/organizations in order to understand the current status of remedial education in Nevada:

[*link to NSHE Remedial Student Data*]

[*link to NSHE Online Student Enrollment Data*]

[*link to general NSHE Student Demographic Data*]

The overall expectations are summarized below and are detailed further in Section 2 of this document. Successful Bidders should expect to provide details and pricing for one or more online products that:

a. Are customizable by the instructor within a framework of student learning outcomes agreed upon through vendor/faculty discussions.
b. Allow for either NSHE ownership or sharing rights after content has been customized.
c. Can provide segmented tutorials in both video and text versions.
d. Are scalable to the particular needs of the NSHE.
e. Integrate with a co-requisite (stretch) approach to remedial instruction.
f. Work across multiple platforms (PC, tablets, etc.).
g. Can accommodate users' ADA (Americans with Disabilities) needs, including UD features.
h. Can provide student data through learning analytics, including export to standard formats.
i. Can provide outcomes data for gateway course completion.
j. Can provide recommended metrics for a defined cohort of students.
k. Can generate reports for management purposes.
l. Have ad-hoc reporting capabilities.
m. Allow for an efficacy review throughout the lifespan of the solution.
n. Accept penalties determined by NSHE if deadlines are not met, service is not provided as promised, or any of the features of the product(s) do not operate as promised.

We ask the Bidders to review the materials provided above and propose the best product or products toward delivering these outputs for NSHE. The evaluation of the proposals will be heavily weighted towards the quality and product features of the suggested approach.

B. *Educational Goals*

The educational goals of this project are to:

1. Provide greater access to remedial education in preparation of college-level coursework though online media, including student support services.
2. Increase the number of Nevada residents enrolling in remedial courses via online media.
3. Ensure online education remedial courses that are delivered show measured success in respect to subsequent student success in credit-bearing courses.
4. Keep costs as low as possible for students.

C. *Stakeholder Groups Served by NREEI*

The NREEI will serve the following stakeholder groups:

- Current undergraduate students in Nevada postsecondary institutions;
- Future students desiring access to Nevada postsecondary institutions, both in-state and out-of-state;
- Adult learners;
- Faculty members at Nevada postsecondary institutions, both full- and part-time;
and
- Education partners.

D. Nevada System of Higher Education

The Nevada System of Higher Education (NSHE) oversees Nevada's seven public institutions of postsecondary education and one research institute. For the latest reporting period, NSHE provides higher education to ____ headcount students and ____full-time equivalent (FTE) students. All degree-granting institutions in NSHE are accredited by the Northwest Commission on Colleges and Universities.

At present, four colleges use Canvas as their learning management system (LMS). The two universities currently use Blackboard LMS.

E. Expectations and Project Direction

This section communicates NSHE's general NREEI expectations and envisioned project direction. Bidders are asked to provide costing and approach information based on the f u n c t i o n a l i t y a n d e x p e c t a t i o n s described below. Where appropriate, Bidders are encouraged to include additional functionality or solution components that may be of value or interest to the NSHE. Such information should be accompanied with related cost and product or services description information.

Since it is not feasible to convey a complete and comprehensive functional scope for Nevada's NREEI within this RFP, NSHE anticipates receiving varied responses. The NSHE acknowledges this constraint and encourages Bidders to provide a response based on their best understanding of the RFP content. For the different products and options provided, NSHE is seeking an "order of magnitude" approximate cost along with descriptive information for review. Once the responses are gathered, a demonstration of the suggested solution(s) may be requested.

F. Scope of Work

Bidders must customize their responses to address these overall objectives for one or more products they may suggest to meet the goals of the NREEI:

    a. Is customizable by the instructor within a framework of student learning outcomes agreed upon through vendor/faculty discussions.
    b. Allows for either NSHE ownership or sharing rights after content has been customized.
    c. Can provide segmented tutorials in both video and text versions.
    d. Is scalable to the particular needs of the NSHE.
    e. Integrates with a co-requisite (stretch) approach to remedial instruction.
    f. Works across multiple platforms (PC, tablets, etc.).
    g. Can accommodate users' ADA (Americans with Disabilities) needs, including UD features.
    h. Can provide student data through learning analytics, including export to standard formats.
    i. Can provide outcomes data for gateway course completion.
    j. Can provide recommended metrics for a defined cohort of students.
    k. Can generate reports for management purposes.
    l. Has ad-hoc reporting capabilities.
    m. Allows for an efficacy review throughout the lifespan of the solution.
    n. Accepts penalties determined by NSHE if deadlines are not met, service is not provided as promised, or any of the features of the product(s) do not operate as promised.

The Bidder shall provide all of the information as indicated below. Failure to submit a complete bid in this format may result in the bid not being considered. The proposed solution for the NREEI initiative will include:

1. A description of the Bidder's experience working with
    a. Institutions similar to the NSHE.
    b. Projects similar to the services requested in this RFP.

2. A list of the higher education institutions with which the Bidder has contracted to perform services similar to those requested in this RFP and the specific activities the Bidder performed under any such contracts. The emphasis should be placed on institutions with (1) a similar mission (land grant, state supported); (2) similar student population demographics (particularly first-generation, ethnic diversity, and non-traditional students); and (3) roughly comparable resources.

3. For each institution listed, the Bidder must state the following:
    a. The institution name;
    b. The name, title, email address, and telephone number of a person at the institution who can respond to inquiries about the Bidder's involvement with the project;
    c. The specific activities the Bidder performed under the contract; and
    d. The dates of performance.

4. A statement about whether any higher education institution has, in the past five years, cancelled any contract with the Bidder and, if so, an explanation n providing relevant details.

5. Bidder shall provide a description and brief history of its organization/company, outlining the size, staff, and management resources that support its operation, development, support and delivery of its products.

6. Bidders shall provide detailed information regarding the proposed solution:
   a. A description of the principles of multimedia design contained within the solution.
   b. A description of how learner motivation is supported.
   c. A description of how content is segregated.
   d. A description of how long (i.e. duration) content is available to the student learner.
   e. A description of how/whether the content is customizable and adaptable by the instructor.
   f. A description of ownership/sharing rights after content has been customized.
   g. A description of the proposed method for agreeing upon benchmarks and student learning outcomes.
   h. A description of recommended metrics for a defined cohort of students.
   i. A description of browsers, tablets, smartphones, and other hardware supported by the solution.
   j. A description of how the solution accommodates users' ADA (Americans with Disabilities) needs, including UD features.
   k. A description of how/whether the solution allows students to make use of tools already available in Word, Google Docs, and other common word processors as well as open source tools as opposed to solely proprietary tools built into the solution.
   l. A description of how/whether the solution contains exercises that allow students to practice skills in context. Examples include, but are not limited to, reading passages that ask students to annotate key elements of a digital text or editing exercises that allow students to apply editing skills in context of a paragraph.
   m. A description about how/whether the solution can provide student data through learning analytics, including export to standard formats.

7. In addition to the descriptive requirements provided above, proposers must also include the following data-based evidence in their response:
   a. Evidence of research that supports the underlying design of the solution.
   b. Evidence that the solution results in improved student outcomes, with special emphasis on providing data from institutions or clientele with (1) a similar mission (land grant, state supported); (2) similar student population demographics (particularly first-generation, ethnic diversity, and non-traditional students); and (3) roughly comparable resources.
   c. Evidence that the solution results in successful gateway course completion.
   d. Evidence that the solution supports multiple modes of instruction.
   e. Evidence of a record of continuous, effective technical support for both faculty and students.
   f. Evidence that an efficacy review can be provided throughout the lifespan of the solution.

8. In their RFP response, Bidders are encouraged to describe and provide product information that would by and large satisfy the NREEI initiative as outlined in the RFP. Additional

referenced products that may be of value and interest are also encouraged.

9. Bidders will provide high-level timelines of each of the following. Provide key milestones, estimated start/end and durations for each:
   a. Assessment Phase
   b. Implementation Phase
   c. Service/Maintenance Phase

SECTION 3
PROPOSAL REQUIREMENTS

BOILERPLATE LANGUAGE TO BE PROVIDED BY
BUSINESS CENTER NORTH

1. Provide information on estimated cost of turn-key solutions, including:
   a. all project costs;
   b. delivery costs;
   c. implementation;
   d. training;
   e. continuous maintenance; and
   f. continuous support

2. Describe your desired billing practices.

Weighted Evaluation Criteria	Possible Points
1. Company Background, Experience and References	25
2. Compliance of Solution to Stated Overall Features and Expectations	75
3. Customer Service and Management Approach	25
4. Pricing	75
Total Possible Points	200

PHASE I REMEDIATION | SKILLS MODULES
NSHE E-LEARNING TASK FORCE