MINUTES OF THE
COMMITTEE TO STUDY THE FUNDING OF HIGHER EDUCATION'S PERFORMANCE POOL, ECONOMIC AND WORKFORCE DEVELOPMENT AND RESEARCH SUBCOMMITTEE
(Senate Bill 374 of the 2011 Legislative Session)
June 26, 2012

The Committee to Study the Funding of Higher Education's Performance Pool, Economic and Workforce Development and Research Subcommittee (Senate Bill 374 of the 2011 Legislative Session) held its first meeting of the 2011-12 Interim on June 26, 2012, in room 4401, Grant Sawyer State Office Building, Las Vegas, Nevada. The meeting was videoconferenced to room 2135, Legislative Building, 401 South Carson Street, Carson City, Nevada and Berg Hall Conference Room , Great Basin College, 1500 College Parkway, Elko, Nevada.

COMMITTEE MEMBERS PRESENT IN LAS VEGAS:
Assemblyman Paul Aizley, Chairman
Senator Ben Kieckhefer
Gregory Mosier
Spencer Stewart

COMMITTEE MEMBERS PRESENT IN CARSON CITY:
Mike Dillon
Jason Geddes
Kris Sanchez for Steve Hill

COMMITTEE MEMBERS PRESENT IN ELKO:
None

COMMITTEE MEMBERS ABSENT:
None

STAFF MEMBERS PRESENT IN LAS VEGAS:
Alex Haartz, Program Analyst, Fiscal Analysis Division

STAFF MEMBERS PRESENT IN CARSON CITY:
Brian Burke, Senior Program Analyst, Fiscal Analysis Division
Mike Chapman, Principal Deputy Fiscal Analyst, Fiscal Analysis Division
Patti Sullivan, Committee Secretary, Fiscal Analysis Division

EXHIBITS:
None

I. ROLL CALL.

Chairman Aizley called the meeting of the Committee to Study the Funding of Higher Education's Performance Pool, Economic and Workforce Development and Research Subcommittee to order at 1:03 p.m. and the secretary called roll. All the members were present at the meeting, with attendance in Las Vegas and Carson City.

Chairman Aizley said the task of the Committee to Study the Funding of Higher Education was to change the way higher education was being funded. He pointed out that the current method of funding higher education was based on funding enrollments, which was a simple thing to count. The Committee had an interest in funding higher education based on performance rather than enrollments, which was more difficult to measure so the subject of performance was divided into three areas: 1) performance pool; 2) economic and workforce development; and 3) research. Chairman Aizley explained the Subcommittee would explore the three areas separately at the meeting; but that the performance pool and performance metrics would also be covered extensively at the Committee to Study the Funding of Higher Education meeting on Wednesday, June 27, 2012.

II. PUBLIC COMMENT.

Chairman Aizley asked for public comment on switching to performance funding, in general, from attendees in Las Vegas, Carson City, and Elko.

Michael Richards, President, College of Southern Nevada (CSN) said when three new elements were introduced into the funding formula process, which would be funded with a fixed amount of money, it was important for the Subcommittee to consider the impact that would have on certain institutions. He indicated CSN would be among those institution that would be impacted. President Richards thought it would further the $20 million funding equity issue, which was recognized by the Board of Regents and addressed by the Legislature over the past two biennia. He hated to see the funding equity issue get any worse; but he also wanted to "put in a word" for the small colleges that might be at a disadvantage by interjecting funding for the performance pool, economic and workforce development and research. He said CSN endorsed the work of the policy academy of the National Governors Association on the performance pool and supported the state's plan for economic development. He cited that CSN provided programming in all of the seven sectors named in the economic development report and he hoped to continue that trend. As the Subcommittee discussed definitions of performance pool, economic and workforce development and research, President Richards wanted to provide help on those definitions and the kinds of programming provided by colleges in Nevada.

Chairman Aizley thought the definitions were going to be very interesting.

Dr. Charles Milne, Chair of the Faculty Senate, CSN provided the following written testimony:

> I thank the committee for taking time to hear from faculty, and I represent the more than 500 faculty at CSN who teach nearly 40,000 students every semester. I want to first express our unqualified support for the Chancellor's revised Higher Education Funding Formula. The proposal funds higher education based on what we do - teach & conduct research - and not for enrolling students. This proposal will encourage institutions to improve student success by increasing course completion in the base part of the formula, and to improve on diverse measures of student success in the performance pool component. This formula has the added benefit of putting to rest the historical funding inequity among NSHE institutions. We at CSN know of this inequity because other community colleges recently were given 70-90% more per student to teach the exact same course to students. That would be equivalent to giving the other community colleges a weighting of 1.0 to teach English 101, while giving CSN 0.53 for teaching the exact same course. This illustrates why we applaud this formula that provides a measure of funding equity.
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> Today's committee agenda addresses workforce development. There are a number of complex, textbook definitions of workforce development. Dr. Robert Jacobs and Joshua D. Hawley, professors of Workforce Development and Education at The Ohio State University have defined it this way;
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> > Workforce development is the coordination of public and private-sector policies and programs that provides *individuals* with the opportunity for a sustainable livelihood and helps *organizations* achieve exemplary goals, consistent with the *societal* context.
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> I like the simple definitions - workforce development is career & technical training, and it benefits the individual and the economy of the region. This would be the associate's degrees & certificates in diverse fields, such as health care professions or paralegal. Colleagues have told me there are single CSN courses that provide an individual with training for a certain job. Students in our automotive program have job offers before graduating & the program enjoys 100% student placement. This is workforce development. CSN is, therefore, THE major workforce development institution in the state of Nevada. CSN provides a tremendous amount of

workforce development and fuels the economy with career & technical training to hundreds of individuals in dozens of fields every semester. Check out our website to see the diversity of training that is available. In addition, we provide courses for updating skills or the required continuing education in many fields. We train & keep the workforce trained at CSN.

Now that workforce development has been defined and illustrated, the question is now how to incorporate this into a performance funding model. Performance funding is simply funding according to the performance of the institution for certain criteria. Performance funding rewards success. Unfortunately, one feature of the performance pool reduces the reward for success, and reduces the incentive for institutions to improve student success. That would be using the 3-year averages or smoothing for performance-based funding, ostensibly to provide predictable funding for planning. In both the base & performance pool, using the 3-year averages for certain criteria for funding will, however, mathematically reduce the reward for success. If the committee wants to provide strong rewards for improving student success, dispense with 3-year averaging of performance.

SRI has stated that the funding of higher education needs to be aligned with the policy goals of the state, both social & economic. To reward workforce or economic development in this performance pool, clear policy goals must first be formulated. Then these need to be translated into metrics for the performance pool. For example, Nevada sees a need for more well-trained bakers in Nevada. Then the community colleges with culinary programs will be given a performance metric related to the number of bakers graduated each year. An improvement of 5% by a community college will be translated into a increased funding for that community college. With true, quick incentives, community colleges can be innovative & respond quickly to increase the number trained significantly. These workforce goals, and performance metrics must remain in place for several years until a target is achieved. The 7 areas referenced in the governor's economic development report will need to be analyzed annually to keep the workforce development aligned with Nevada's needs.

A workforce goal will be different than other performance metrics, such as program completion or the success of students in remediation. Those are measures of student success, whereas the performance metric for workforce development which can only be done by the community colleges, will be more of a directed

production by those colleges. This is needed in the revised funding formula and CSN is ready to meet the workforce needs of Nevada.

Dr. Geddes noted that the Board of Regents created a Workforce, Research and Economic Development committee in response to the commitment from NSHE to improve workforce grants and research grants, the Legislature's approval of Assembly Bill 449 of the 2011 Legislature and the creation of the Governor's Office of Economic Development,. He said the Committee was working with the System to align its priorities with the priorities of the state. Dr. Geddes indicated Regent Kevin Melcher from Elko was appointed by the Board as Chairman and in order to hear the discussions Regent Melcher was attending the Subcommittee meeting in Elko.

Jim Richardson, Nevada Faculty Alliance, provided public comment, but testified representing himself instead of the Alliance because the group had not yet been able to discuss the funding formula issues in great depth. He reminded the members he had served on the previous funding formula study committee. Even though the formula had been much maligned he thought that committee did a good job at the time; however, he agreed with Chancellor Klaich it was time to revisit the issue. Mr. Richardson provided the following written testimony:

1. What has been proposed by the NGA has some very positive features, including the inclusion metrics on STEM and allied health grads, low income grads, external research funding, and Gateway Course completers.
2. The proposal needs to include some national benchmarks in any set of performance metrics. Otherwise the proposal will suggest that we are unwilling to compare results of our efforts using typical national comparison metrics. We need some way to assess quality of our degrees, and using national benchmarks seems the logical way to do this. For instance, if a combined metric was developed that included both the achievement of national averages on graduation rates and the percentage improvement on graduation rates at 50% each, this might work as a national benchmark metric for use with the universities. Something analogous could be developed for the colleges, if this was deemed a useful approach.
3. There needs to be new money to make this scheme work without penalizing institutions that have already suffered huge budget cuts but been forced to maintain full programs in spite of those funding loses. (Indeed, I am not sure how a carve out from base funding would work at all, given that 85% of our budgets are personnel, and the traditional notice requirements for termination of professionals in higher education institutions.)
4. I would also suggest consideration be given to the separation out of doctoral versus master's grads, given the much larger investment of resources in the production of doctoral graduates.

In concluding his remarks, Mr. Richardson added that additional funding needed to be addressed for performance funding to work.

Chairman Aizley pointed out that the funding formula, whether it was the current formula or the proposed new formula, did not produce dollars, but rather showed the needs of the System. He said Mr. Richardson raised a question regarding what would happen with inadequate funding even with a formula in place. Chairman Aizley said that question needed to be answered, but was not the job of the Subcommittee. In regard to performance funding, he envisioned the job of the Subcommittee as identifying the components that were going to be measured and then utilizing the performance metrics to determine how they would be measured.

Joan Rutledge, Manager, Division of Workforce and Economic Development, CSN, provided the following written testimony:

> The Division is a self-supporting Division of the College that works with the region's businesses and key industry sectors. The division provides customized training for employers and non-credit skills classes for adults seeking new skills, career opportunities and advancement.
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> CSN provides a comprehensive workforce development program through its credit and non-credit offerings, all of which are essential to preparing and maintaining a skilled workforce.
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> Of the six academic schools at CSN, three (School of Health Sciences, School of Advanced and Applied Technologies, and the School of Business, Hospitality and Public Services) are solely dedicated to producing Associate of Applied Science Degrees that provide for direct entry into the workforce.
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> - We are currently aligning our degrees into the seven workforce sectors that the governor's economic development plan outlines and conducting a gap-analysis on where we need to be in the future
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> In addition to its degrees, CSN offers a variety of programs resulting in Certificates of Achievement and Certificates of Completion. These programs prepare students for specific high-demand occupations such as Emergency Medical Technicians, Certified Nursing Assistants and Phlebotomists.
>
> The Division of Workforce supports CSN Academic Departments by providing continuous non-credit certifications required by industry.

Many of these certifications are needed for our students to acquire employment or for current employees to maintain licensing.

- In 2011 the Workforce Division certified 800 students in CPR and Advanced Cardiac Life Support. Much of the Southern Nevada healthcare community returns to CSN to receive specific skills certification through our American Heart Association Training Center.

- CSN's OSHA Training Institute offers 54 industry certificate classes and provides 10-30 hour safety training and certification – this is required by law before work can start on a construction site.

In conclusion, these are just a few examples of how CSN's credit and non-credit programs support everything the state is doing in economic development.

Thank you for the opportunity to comment.

Michael Spangler, Dean, School of Advanced and Applied Technologies, CSN, expressed his support for the NSHE funding formula and performance pool for its ability to encourage course completion and degree completion, which would ultimately diversify Nevada's economy. Mr. Spangler provided the following testimony regarding the impact of Associate of Applied Science degrees on economic development:

CSN's Associate of Applied Science Degree provides for job placement at a family sustainable income: We prepare younger and older adults for many high wage, high demand careers. To illustrate the demand I have a brief list of technical jobs and the corresponding college program. Some of them are:

Job	**CSN Program**
Automation & Sensors	Engineering Technology-Electronics
Biomedical Equipment Maintenance	Engineering Technology-Electronics
Data/Voice Transmission	Engineering Technology-Telecommunications
Fiber Optic Installation	Engineering Technology-Telecommunications
Slot Machine/Self-Serve Device Repair	Engineering Technology-Electronics/Slot
Networking/Server Technician	CIT-Networking/Internetworking
Computer Forensics	CIT-Electronic Crime Investigations
Data Security & E-Commerce Specialists	CIT-Network Security

Job	CSN Program
Theater Automation Tech	Engineering Technology-Tech Theater
Power Plant Operations	Engineering Technology-Power Utility
Water Treatment Operator	Environmental Safety & Health-Water
Waste Water Treatment Operator	Environmental Safety & Health-Wastewater
Commercial Refrigeration Technician	Air Conditioning & Refrigeration
Central Plant Operations	Air Conditioning & Refrigeration
Pipefitter Steamfitter	Welding
Food and Medical Grade Metal Fabricator	Welding

In all of these programs we have virtually 100% placement. In fact, we struggle to keep students in the program because they frequently get hired prior to graduation. These fields all have high growth potential and would yield annual incomes around $50 K with several earning considerably more.

In all these fields we see job growth that cannot be "outsourced." I am convinced that Southern Nevada's unemployment issues are not a function of job availability but of workforce preparation. We have local employers actively conducting national searches for technically trained employees mostly because the demand exceeds our capacity to prepare technicians skilled in such fields as Automation & Controls, Electronics & Telecommunications, or Networking & Data Transmission.

CSN's contribution to economic development also includes introducing new technologies. An example is our GHP-Gas Heat Pump project with Southwest Gas and Intellichoice Energy. This is a natural gas heat pump which is about to revolutionize air conditioning in the region. The technology uses natural gas to power commercial air conditioning. As you know, the U.S. is the Saudi Arabia of natural gas. This GHP technology allows us to power an air conditioner that would handle much of this building with the size of the gas line that goes to your house and the electricity that powers your blender. CSN, through a $250,000 congressional grant is the nation's sole source for training in this technology.

Our purpose is to produce highly skilled, employable technicians from a population of entry level students and displaced workers. With your help we can continue to serve the citizens of Southern Nevada. I am happy to answer any questions you have. Thank you.

Patricia Castro, Dean, Engelstad School of Health Sciences, CSN, wanted to share information about the health programs at the college and provided the following written testimony:

> There are currently 30 Allied Health programs at CSN that lead to high wage, entry-level employment. These include 1 BS program in Dental Hygiene (completely on-line), 12 Associate degree programs, 8 Certificate of Achievement programs, and 9 Certificate of Completion programs. We are starting a BAS degree in Clinical Laboratory Sciences in Fall 2012, and a BAS in Cardiorespiratory Sciences in Fall 2013.
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> We have over 10,000 students in the Engelstad School of Health Sciences. Our students have consistently high first-time pass rates on licensure and certification examinations, often with scores of 90% or higher.
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> Some of the high-demand professions for which we provide training include: Radiation Therapy, Health Information Technology, Phlebotomy, Diagnostic Medical Sonography, Veterinary Technician, Nursing, Medical Office Assisting, Occupational Therapy Assistant, and Physical Therapist Assistant.
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> Our students provide over one million hours in uncompensated care annually through clinical rotation and other service learning activities. CSN also provides a majority of the Health Care workforce in Southern Nevada (including about 1/3 of all Nursing graduates).
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> I also shared some data that was of concern to me as a Health Care educator and a Health Care consumer.
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> - Per capita Health Care spending is growing at a faster rate in the United States than anywhere else in the world.
> - This is due to an increase in the baby-boomer generation, with 78 million boomers expected by 2030; an increase in Health Care consumerism; and a decline in the health of the US population due to life style choices.
> - Health Care jobs are growing faster than any other industry sector, with an expected increase of about 30% by 2020. These jobs include professional and technical support personnel (i.e., Doctors, Nursing professionals, and other Allied Health professionals) , as well as support personnel (i.e., Home Health Aide, Pharmacy Aide, Athletic Trainer, Massage Therapist). We provide training for many of these disciplines at CSN.

- The supply will grow too slowly to keep up with the demand. The public expects skilled practitioners, increasing the demand for post-secondary education in Health Care professions. By 2020, 82% of all Health Care jobs will require some post-secondary education and training. 5.6 million job openings, mainly due to retirements, are expected by 2020.

This puts a lot of pressure on Higher Education institutions, especially Community Colleges, where many of these technical programs are offered. Spending cuts greatly impact the ability of Higher Education to educate the future workforce.

Along with the increase in tuition, Health Sciences students have additional expenses associated with Health Care education (i.e., background check, drug test, physical exam, numerous immunizations, uniforms, equipment and other instruments). This specialized education also requires state-of-the–art classrooms and laboratories to keep up with industry standards. We need to recruit and retain the best faculty; currently we are unable to compete with the salaries of clinical practitioners.

I thank the Subcommittee members for the opportunity to address them and offer my support for the proposed funding formula.

Chairman Aizley did not hear any suggestions in the public comment testimony for measuring the quality of the outcomes, except from Dr. Castro who referred to high first-time pass rates on licensure and certification examinations, with scores of 90 percent or higher. He thought that was a good method to measure the value of the outcome rather than just counting the numbers. Chairman Aizley said in developing the formula it would be helpful to come up with metrics, not just the number of events, and then a way to evaluate the events.

Cecilia Maldonado, Associate Professor, Workforce Development, and Immediate Past-Chair of the Faculty Senate, UNLV, indicated she was asked to attend the meeting to help define workforce development. In reference to workforce development, she understood what was missing in the state and why the state had used a haphazard approach to workforce development in the past. Dr. Maldonado said workforce development was a new emerging term and was defined as the “coordination of public and private sector policies and programs that provide individuals with the opportunity for sustainable livelihood and helps organizations achieve exemplary goals consistent with the societal context.” The definition indicated that workforce development had evolved to describe any one of a relatively wide range of national and international policies and programs related to learning for work. Dr. Maldonado presented the following four overall goals for workforce development:

- How goals and agencies prepared individuals to enter or re-enter the workforce. The state's public workforce development initiatives and the community colleges provided this service.
- How organizations provided learning opportunities to improve workplace performance. This was completed through HRD organizational development; but currently there were no programs in the state on this issue because a masters' program in training and development was cut due to budget constraints.
- How organizations responded to changes that affected workforce effectiveness. Due to the lack of metrics the state had been unable to determine the effectiveness of many of the available public and private programs.
- How individuals underwent life transitions related to workforce participation. This was a major issue because individuals were having six to eight careers over their lifetime, and with increasingly more sophisticated requirements in the workplace a higher level of education was required.

Dr. Maldonado believed everyone understood that the American way of life was fundamentally dependent on economic competitiveness, and strong economies were characterized by an abundance of well-paying jobs with overwhelmingly well-paying jobs held by individuals who had knowledge and skills obtained through education beyond high school. She said the current economy and information age required human capital and changes in the way businesses operated placed new demands on employees. Dr. Maldonado said first, the average worker changed jobs several times and the era of lifetime employment with one company had passed. Second, the workplace was being transformed into a high performance arena requiring workers to take on a greater variety of tasks through improved basic skills requiring literacy, computational abilities, work readiness, and flexibility skills. It was known that 44 percent of the states' current workforce did not have the literacy levels to perform those types of activities so there were professionals in organizations that needed to work on improving those skills. Third, jobs required rapidly changing skill sets, which in turn required life-long learning for workers. Computer competence and utilization of rapidly changing technologies would become a prerequisite to compete or even survive in today's workforce. Dr. Maldonado said that labor economists indicated 70 percent of all jobs in the near future would require an education beyond high school, which included post-secondary training, associate's degrees, Applied Science degrees as well as Bachelor's and graduate education.

Continuing, Dr. Maldonado explained she headed a Ph.D. program in workforce development and organizational leadership, which was an increasingly popular program at UNLV. However, with only two faculty working in the program, she indicated it was difficult to prepare professionals and conduct the research that was needed to improve the quality of workforce development in the state. Many states including Ohio, New Jersey and Illinois had created a workforce development system coordinated at the state level and she thought the passage of A.B. 449 (2011 Legislature) and the Governor's Initiative for Economic Development would help Nevada begin to establish a much needed system. Dr. Maldonado said it was essential for Nevada's system to be

integrated and comprehensive, and collaborative with both public and private agencies, businesses and educational institutions in order to ensure workers in the state life-long learning employment and job program opportunities. She explained the system must also be accessible to everyone, customer focused, and data driven. A research study she had read considered Nevada one of the poorest data driven states, with little data to make concerted decisions around workforce development initiatives, especially with regard to economic diversification. In addition to being data poor, Nevada was also thought of as lacking capacity, "silo'd," and focusing on second-chance training programs. She indicated Nevada was not necessarily associated with economic development, which hurt the states chances to be competitive. Dr. Maldonado thought the development of a comprehensive system at the state level would improve the opportunity to be involved in economic diversification. The program at UNLV developed professionals to become leaders in the field of workforce development. Dr. Maldonado stressed that it was important to support the universities in preparing the professionals who would work in workforce development, provide research and the data that was needed to align those systems.

Chairman Aizley asked if there was a difference in workforce preparation at UNLV and UNR versus CSN or TMCC, or any of the other colleges.

Dr. Maldonado said there were different levels of workforce preparation. The universities prepared the professionals who would run and work in these programs in the private or public sector along with the research that would be needed to align the systems. The community colleges prepared entry into the workplace and provided the necessary skills in a career, technical area or working with small businesses through the workforce development division.

Chairman Aizley concluded that the type of job the students were preparing for was the difference in the programs.

Dr. Maldonado agreed and said UNLV prepared individuals for the professional market, and the types of professions that had high research and development such as a professional workforce in engineering and science .

Chairman Aizley asked if there was difficulty in comparing metrics equitably at the two types of schools.

Dr. Maldonado replied it was difficult and took longer to prepare someone obtaining a doctoral degree. She said there were 40 students in the program at UNLV, with only two professors, so it was a challenge to get those students through the dissertation phase and the collection of needed data. The students at UNLV were encouraged to engage in things related to Nevada so comprehensive systems could be explored in the state. She thought at CSN, for example, there was more flexibility in preparing technical workers at the beginning level or with more sophisticated technical degrees in a much shorter time period.

Dr. Mosier suggested as the Subcommittee looked at workforce development to keep in mind that it was merely a strategy as a part of the bigger economic development goal that needed to be addressed in the state. He said economic development also included components that would enhance the quality of life and things that did not have a direct correlation. Dr. Mosier thought that economic development by its nature was broader than just the workforce piece.

David Zeh, Chair, Department of Biology, Chair, Faculty Senate, UNR, provided the following written testimony (read by Alex Haartz, Program Analyst, Fiscal Analysis Division).

> Thank you Chairman Aizley for this opportunity for public comment. My name is David Zeh, and I am Chair of the University of Nevada Reno, Faculty Senate
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> I would like to comment on the latest version of NSHE's Performance Pool Model (version 16), specifically with regard to the Nevada universities, that is, UNR and UNLV. First, I suggest that the new model, which now includes a 20% weight for research expenditures, is a step in the right direction. Rewarding research productivity is essential to ensuring that our universities remain centers of learning excellence.
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> Nonetheless, I am disappointed that this new model does not include direct incentives for institutions to become more efficient at graduating their students. Without such incentives, we will be doing a disservice to our students and also to our institutions of higher learning.
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> As you may know, student loan debt has replaced auto loan debt and credit card debt as the top source of debt in the nation. The total outstanding student loan debt now stands at a staggering $870 billion. For all borrowers across the nation, the average student debt is $23,000. In this regard, it is important to point out that the longer a student pursues a degree, the greater the debt accrued. That is, there's a strong relationship between the years to completion and the accumulated debt. Moreover, students who fail to graduate accrue large amounts of debt without any of the considerable economic benefits of obtaining a BS or BA degree.
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> In Nevada, we cannot just reward institutions for the number of graduates. We also must incentivize our institutions to become better at the efficiency with which we graduate our students. Right now, 14% of students at UNR and UNLV complete their degrees in four

years. The six-year graduate rates, about 40% at UNLV, and approximately 53% at UNR, are much better but still are not nearly high enough by national standards.

To address this problem, we need to include six-year graduation rates in the NSHE Performance Pool component of the new Funding Formula. As a starting point in the discussion, I propose that a 10% weight be applied to six-year graduation rate in the current "University Performance Outcomes and Points" model. To compensate for including this new metric, the weights for number of Bachelor's degrees and Master's and Doctoral Degrees should each be reduced by 5%, to 35% and 15%, respectively.

Nevada recently received a failing grade for the "student access and success" component of the recently published "Leaders & Laggards: A State-by-State Report Card on Public Postsecondary Education" by the U.S. Chamber of Commerce (http://icw.uschamber.com/reportcard/nevada/). A major factor in determining Nevada's F grade was "The four-year institutions rank in the bottom 10 states in terms of completion rate ... " While graduation rate is not a panacea for student success, it is a national and international benchmark by which universities are ranked. Increasing graduation rate at NSHE's universities will lower the debt burden on our students, improve the rankings of our universities, and attract businesses to the state seeking a well-educated work force.

P.S. Tennessee has recently adopted six-year graduation rate as a significant component of their funding formula for higher education (http://www.state.tn.us/thec/) and it is likely that other states will be following Tennessee's lead. Thank you.

In regard to Dr. Zeh's testimony, Chairman Aizley said the suggestion of a six-year or four-year graduation rate raised the question of why not utilize a five-year or seven-year graduation rate instead. He thought all those numbers would have to be considered before a decision was made on the best possible outcome. Chairman Aizley also commented that much data were available and thought some of it was used in a simplistic way and could be used better. Therefore, in the Subcommittee he looked forward to good discussions about how to work with the formula to determine if better numbers for reliability and equity could be achieved.

There was no further public comment.

IV. DISCUSSION OF THE FOLLOWING ISSUES WITH REGARD TO ALIGNING THE EFFORTS OF THE NEVADA SYSTEM OF HIGHER EDUCATION (NSHE)

CONCERNING ECONOMIC DEVELOPMENT, WORKFORCE DEVELOPMENT, RESEARCH AND PERFORMANCE FUNDING WITH THE STATE OF NEVADA'S EFFORTS FOR ECONOMIC DEVELOPMENT, WORKFORCE DEVELOPMENT AND RESEARCH:

a. THE DEFINITION OF THE TERMS "ECONOMIC DEVELOPMENT," "WORKFORCE DEVELOPMENT," "RESEARCH," AND "PERFORMANCE FUNDING ."

b. THE MANNER IN WHICH NSHE'S ECONOMIC DEVELOPMENT, WORKFORCE DEVELOPMENT AND RESEARCH EFFORTS MAY BE INCORPORATED INTO A SYSTEM OF PERFORMANCE FUNDING FOR NSHE.

Chairman Aizley opened the discussion on research. He said the Subcommittee did not yet have a definition of research and thought if the amount and the kind of research were going to be measured then a definition was needed. However, the definition would not be universal or the same everywhere. He cited two examples of research. The first was a young person finding out the names of all the states and their capitals in which they would go to the library and research the answers. The second was Andrew Wile, a professor of mathematics in England, who took a leave of absence from his home institution to solve a problem that was unsolved for more than 100 years and 7 years later he had a solution. Chairman Aizley asked what Nevada would do to support that type of research, and was it good or bad research. He said a speaker at one of the Higher Education Study meetings had given a definition of research to include that there was no research unless there was a transmission of new knowledge. He wondered if that meant everything in the library or everything someone worked with to determine the outcome was not research. He asked if undergraduates were doing research, were they really finding new knowledge in their research programs or just putting things together in a new and inventive way. Chairman Aizley thought either way was fine, if that was the way research was defined and rewarded. He pointed out that it would be a major problem for the universities to find a way to reward and fund research particularly if there was a researcher that was not doing any classroom teaching. He knew faculty at CSN who did research and also had five course teaching loads, which he did not think was built into the rewards structure. Chairman Aizley stressed that if research was a major component of a system of higher education then no matter where research happened it should be rewarded. He did not see the formula headed in that direction so asked the Subcommittee members or members of the public to comment on how the state was going to support research at all the levels and especially at the universities.

Senator Kieckhefer traditionally thought of research as granted, funded research where institutions brought in outside dollars and utilized them to develop new technologies, learn new things and gain information, as well as insight that could be converted into a practical use. In terms of technology transfer, he thought the System made an effort to commercialize new technology; however, even though there was a proposal from the System that distributed research money based on upper level instruction he did not think those two were automatically correlated. Senator Kieckhefer would have to be

convinced to support something like that and if the state was going to invest dollars into research there needed to be a clearer understanding of what that meant and why it was being funded. He thought as the state tried to incentivize education for a new workforce, a strong part of it needed to be the generation of outside revenue and then the ability to transfer that to research.

Chairman Aizley said Senator Kieckhefer brought up one of the two standard ways of measuring research, which was obtaining research dollars and the one not mentioned was the publication of papers. However, he did not think those were the only ways to measure research. He did not think Nevada would be able to support someone like the professor who took seven years to solve an unsolved problem yet he received worldwide recognition and it was research at the best level.

Dr. Mosier thought different disciplines approached research in different ways depending upon the discipline. He explained that in the hard science areas the types of grant funded research were the clear metric by which the research was always evaluated. That research might have been given significant research dollars; however, it might not be the next thing that improved the economy, but at least it was a metric to look at in those sciences. In social sciences, publication through journal articles or through professional outlets were the metric used, but that type of research could have a significant impact upon economic development. He thought both types of research should be taken into account.

Kristopher Sanchez, Agency Liaison/Policy Advisor, Governor's Office of Economic Development represented Director Steve Hill at the Subcommittee meeting said one of the things the Office was focused on was the coordination effort and alignment with the sectors. Touching on research and its measurement, he said with tech commercialization the number of start-up companies established, the patent grants awarded, the tech licenses issued and IP disclosures for intellectual property could be used as metrics. He thought it was important to look at each individual sector to see what was important to be accomplished and tech commercialization provided a good illustration of some of the creative ways in which other metrics could be applied to research in addition to grant dollars and publications.

Dr. Mosier thought it was important to look carefully at the types of things that fell outside of traditional vocational areas because it was not always necessary to show a direct tie between research to vocational training or to providing job opportunities. The broader definition of economic development included quality of life. He thought if the state began to focus too much upon technical education to the exclusion of other types of studies and disciplines that led to quality of life Nevada would be identified as merely devoted to those areas.

In reference to the funding formula factors, Mr. Dillon asked about the actual nexus between research grants and upper division instruction and if it varied between

institutions or if there was a national standard. He also wanted to establish a definition for "performance funding" to ensure transparency when the term was used.

Mr. Sanchez read the following definition of economic development:

> *"Is a process that influences growth and productivity and therefore prosperity in regions and the state. Economic development includes ensuring workers have the right skills to remain competitive, supporting innovation and entrepreneurialism structuring a strong business environment and providing necessary infrastructure. The goal of economic development is to foster better jobs and higher wages leading to a higher standard of living for Nevada and its citizens."*

Continuing, Mr. Sanchez said in reference to some of the testimony and regarding a broader definition he thought this definition could serve as a starting point. However, the definition may not encompass the other social aspects of economic development identified in the meeting testimony.

Chairman Aizley asked Chancellor Klaich to comment about Mr. Dillon's question regarding the nexus between research grants and upper division instruction.

Chancellor Klaich looked forward to the expanded discussion at the Committee to Study the Funding of Higher Education meeting on June 27, 2012, with respect to the performance pool and presentations by Travis Reindl from the National Governors Association as well as Heidi Gansert and Crystal Abba. He explained that NSHE tried to look at a couple of ways of measuring research to provide a base for funding of the research effort at the two universities. The goal was to create a metric that could be clearly validated and transparent. Key ways to measure research were by external dollars and by publications and NSHE thought measuring the dollar portion would be an easier metric that could be easily understood, measured and reported. It proved difficult to figure out how to create a metric that funded the research pool. One of the suggestions was to look at the current research productivity of the two universities and use that as a benchmark for the awarding of funds and then measure the progress as that research grew. After much consideration that method was not chosen because Chancellor Klaich said that metric seemed to predominately favor UNR, which had a longer history and the School of Medicine. The state of Ohio used another methodology that NSHE studied which used upper division teaching where the "fruits" of the research effort was seen in the upper division classes, masters and doctorates and for that reason that approach was ultimately chosen. NSHE saw the nexus as that the place within the research institutions where the most creative activity took place was at the upper division level and the masters and doctorates.

Mr. Dillon did not completely understand how it correlated with the funding formula proposal, which was supposed to be based on enrollment and the success rate of graduating the enrollees.

Chancellor Klaich said NSHE was trying shift the emphasis from enrollment to completion and asked the Subcommittee to look at a metric from which NSHE could measure an appropriate research pool. The research pool of dollars would be awarded to the two universities to fund their research infrastructure and NSHE was asking them to change where the work was done that would result in the creation of new knowledge and then translate into dollars. He said the proposed metric was one NSHE had seen used before; however, it might not be the optimum choice. Chancellor Klaich was willing to look at other best practices to see if there were other metrics that were more commonly used.

Chairman Aizley asked if there was something in the metric to determine how long NSHE would wait to see if anything was produced from any particular research.

Chancellor Klaich said NSHE proposed that research dollar activity be measured on an annual basis at each institution also keeping in mind that research was a continuum, which would result in a longitudinal analysis.

Chairman Aizley said it sounded great. He liked that there was a way to measure the department, not the individual so there was a timeline in the department that was producing the results.

Dr. Stewart said in the most recent SRI International report, one of the conclusions was that not all research was created equal and that Nevada was not in a position to treat all research equally. If all research were not the same, he was interested if additional weight would be given to research and research activities that had direct application to economic development and as they related to Nevada's seven industry clusters.

Chancellor Klaich said the System's proposal attempted not to discriminate as what might be perceived as good research, bad research, affordable research or unaffordable research. He indicated the System would look at the dollar metric because research not only had to viewed as the creation of knowledge, but also at the creation of dollars generated into the institution that supported the research. However, in the portion of the performance pool aimed at research, Chancellor Klaich said there was a metric in the performance pool that was directly related to the correlation of the mission of the institution and the economic development work that Mr. Sanchez, Mr. Hill and the Governor's Office of Economic Development was doing with the state. The coordination of institutional mission, and work products and degrees, with economic development was a specific portion of the performance pool that would be presented at the Committee to Study the Funding of Higher Education meeting on June 27, 2012.

Dr. Geddes liked the emphasis on Science, Technology, Engineering, Mathematics (STEM) and healthcare in the SRI International report as components beyond the seven sectors in the state plan. He thought the seven sectors in the state plan were important, but the state needed strong ideas of where it was going with STEM education in K-12 to

ready students for the community colleges and the universities. He said the whole K-20 system should be considered in providing opportunities for teachers, and counselors to get students prepared for college. Dr. Geddes thought the economic development clusters should not be devalued as value was placed on others.

In closing, Chairman Aizley said if the state was going to have a funding formula that produced the amount of dollars needed in the future he thought the variables in the formula would be very important. There were many differences of opinion of what belonged in the funding formula and he expected the members to bring their ideas to the meeting on July 23, 2012, to develop the needed metrics.

VII. PUBLIC COMMENT.

There was no further public comment.

VIII. ADJOURNMENT.

Chairman Aizley adjourned the meeting at 2:15 p.m.

Respectfully submitted,

_____
Patti Sullivan, Committee Secretary

APPROVED:

_____
Paul Aizley, Chairman

Date:_____

Copies of exhibits mentioned in these minutes are on file in the Fiscal Analysis Division at the Legislative Counsel Bureau, Carson City, Nevada. The division may be contacted at (775) 684-6821.