

LaSTEM ADVISORY COUNCIL MEETING NOTES
February 27, 2019
1:30 p.m.

The LaSTEM Advisory Council met in session at 1:34 p.m., Wednesday, February 27, 2019, in the Thomas Jefferson Room, Claiborne Building, 1201 North Third Street, Baton Rouge, LA. Senator Sharon Hewitt called the meeting to order.

Committee Members/Representatives Present

Kim Hunter-Reed, Chair
Susie Schowen, Co-chair
Mahyar Amouzegar
Randy Duran (Frank Neubrandner)
Michael Gaudet
Patty Glaser
Crystal Gordon
James Henderson (Jeannine Kahn)
Sharon Hewitt
Jeff Holcomb
Jada Lewis
Todd McDonald (proxy)
Janet Pope
Scott Stevens
Rachel Vincent-Finley
John White (Ken Bradford)
Kellie Taylor-White
William Wainwright
Jaime Williams
Laura Younger
Tom Yura

Committee Members Absent

Larry Carter
Trisha Fos
Stephanie Hilferty
Carrick Inabnett
Calvin Mackie
Stanton McNeely
Kristen Reeves
Ken Tucker

Staff Members Present

Susannah Craig
Lisa Smith-Vosper
Matthew LaBruyere
Jill Holton
Shannon Domingue

I. WELCOME, ROLL CALL, & UPDATES

Senator Sharon Hewitt called the meeting to order at 1:34 p.m. Dr. Susannah Craig, Board of Regents Associate Commissioner for Teacher and Leadership Initiatives, conducted roll call and established a quorum.

Dr. Craig asked for a motion to approve the minutes from the October 2018 LaSTEM Advisory Council meeting.

On motion of Dr. Kim Hunter Reed, seconded by Tom Yura, the Committee voted unanimously to accept the minutes from the October 16, 2018 meeting of the LaSTEM Advisory Council.

Dr. Craig referenced the 2019 LaSTEM Council Status Report that was sent to the Legislature in January 2019. She highlighted the following accomplishments of LaSTEM for 2018.

- Ten meetings in 2018 with nine (9) “STEM Showcase” presentations
- Classroom Teacher Enrollment Program (CTEP) reinstated
- New STEM Jumpstart graduation pathways
- 2018 STEM Summit (over 500 participants)
- STEM Fellows
- VEX Robotics
- STEM Endorsed High School Diploma
- Festival Robotique 2018 (FIRST)

Senator Hewitt was highly impressed with the September 2018 STEM Summit. It laid the groundwork for the regional STEM center concept. There were three (3) separate tracks—K-12, higher education, and breakouts by region that consisted of economic development, educators, and STEM providers in geographic regions. A regional STEM meeting followed the STEM Summit, and participants were highly enthusiastic about partnering to fill the gaps.

II. COUNCIL DISCUSSION AND VOTING

Dr. Craig stated that Resolution No. 1 was ready for a vote from the LaSTEM Advisory Council. Resolution No. 1 was written to authorize the members or officers of the LaSTEM Advisory Council to withdraw money from the LaSTEM Fund and separate account within the fund. The Louisiana Board of Regents cannot be reimbursed, and financial transactions cannot be executed without LaSTEM Council approval of Resolution No. 1.

On motion of Michael Gaudet, seconded by Scott Stevens, the Council voted unanimously to accept Resolution No. 1, authorizing members or officers of the LaSTEM Advisory Council withdraw money from the LaSTEM fund and the separate account within the fund.

However, following the motion, Kellie Taylor-White asked for clarification as to why authorization is necessary to withdraw funds from both the LaSTEM fund and the separate account if donations were specifically deposited into the secondary account. Dr. Kim Hunter-Reed indicated that Terrence Ginn, Deputy Commissioner for Finance and Administration, would clarify.

Also following the motion, Senator Hewitt posed the following questions and concerns relative to Paragraph 4 of Resolution No. 1: (1) is the LaSTEM Council Coordinator an official title, and will the use of the word “and” on the account require both the “LaSTEM Council Coordinator” and the “Commissioner of Higher Education” to endorse checks and execute transactions. She stressed the wording should be clear and concise relative to the needs and intentions of financial transactions. Dr. Reed stated that Mr. Ginn would clarify this information, in addition to the question posed above by Ms. Taylor-White.

The Committee’s prior unanimous vote to authorize Resolution No. 1 was tabled until clarification for questions and concerns posed by Kellie Taylor-White and Senator Sharon Hewitt relative to Paragraph 4 could be provided.

Dr. Craig moved on to discussion relative to the Regional STEM Center Framework document written by former LaSTEM Council Coordinator, Dr. Vernon Dunn. The framework consists of information gathered from the LaSTEM Advisory Council and a team Dr. Dunn collaborated with. Dr. Craig stated that a motion was needed in order to continue further discussion of the framework.

On motion of Tom Yura, seconded by Crystal Gordon, the Council voted unanimously to commence discussion of the LaSTEM Regional STEM Center Framework document.

Dr. Craig began discussion by stating the mission of the framework: “to serve as an incubator and accelerator for PK-workforce STEM programs in the region, and to promote STEM talent development at all levels. Each Regional STEM Center will fulfill its individual strategic objectives as defined by the Regional STEM director while ensuring that the overall mission aligns with that of the LaSTEM Council.”

Dr. Craig stated that the document is merely an outline, and the context of the framework will continue to evolve. The plan outline is listed below:

1. Establish Regional STEM Centers (RSC)
 - A. Regional STEM Director to create, coordinate and promotor STEM activities in the region
 - B. Physical Space to house the work of the RSC
 - C. Functions: Visiting and Setting
 - D. Development (Pursuit of Donors)

As noted in the framework, the intent is NOT to take over or dismantle existing STEM programs but provide regional coordination and extend their reach.

2. Functions: Improve STEM Teacher Recruitment, Retention, and Tech Skills
3. Functions: Change the STEM Culture to Encourage Integrative and Experiential Learning
4. Functions: Increase female, minority, military, and special needs completers
5. Functions: Workforce Engagement

Dr. Craig asked for feedback and questions from the Council relative to the document. Ms. Taylor-White asked if regions have been defined. Susie Schowen added they were defined based on regional labor market areas, and that the northeast and northwest regions have been combined at the request of participants in a break-away session of the 2018 LaSTEM Summit.

Ms. Taylor-White asked for clarification of the funding source for the Regional STEM Director. Ms. Schowen stated that the funding would be identified by each region in terms of asset inventory, as existing funds are already available for these positions in the regions. Any additional funding mechanisms would have to be identified by the Council. Ms. Schowen emphasized that the framework is intended to be an asset/aid to the regions as they are defining their own needs and visions.

Tom Yura, as a follow-up to previous discussion, emphasized the need for sustaining the process and tailoring the program, and differentiation of regions across the State based on needs, and connections of goals and objectives to the actual framework.

Michael Gaudet emphasized that the Regional STEM Director would consolidate and coordinate STEM activities and wished to prevent being mistaken or identified as an actual service provider. However, Dr. Reed added that an advocate/coordinator who is already established in the region could serve in a dual role as a service provider, and this framework will aid in establishing the criteria for development of Regional STEM Centers. Mr. Gaudet stated that the LaSTEM Advisory Council should maintain its role as a leveraging committee and not that of a service provider. Mr. Yura stated that the framework should be clear in its intent, such as building upon research and coordinating great work already performed and is not exclusive to merely “building centers.” Senator Hewitt expanded on the intent of the framework to include that as enablers, identifying the gaps will allow the local people to recognize any state-wide workforce barriers that industry partners may need. She also stated that the Council needs to be

clear in the framework what the responsibility distinctions are at a state level vs. regional level. Jada Lewis expressed concern over Regional STEM Centers and their long-term sustainability, accountability, and priorities. Dr. Reed added that the Regional STEM Centers are regionally co-created and regionally owned with feedback to the Council, and each region should develop a strategy to determine which goals they wish to implement. Dr. Reed reminded the Council that Dr. Dunn created the framework based on feedback from the Council.

Dr. Janet Pope posed a question in reference to *B.2. – Supplement teacher pay in high demand and critical shortage areas to compete with industry*. She asked for clarification on the funding mechanism for supplementing teacher pay. Dr. Craig stated that each region would be responsible for utilizing a culmination of private funds. Ms. Schowen added that establishing a funding mechanism is a state-wide goal and each region cannot be expected to sustain accountability for such. As a Council, specific state-wide focus and responsibility is paramount to the success of each region's ability to meet their strategic goals and objectives. Dr. Reed elaborated on Dr. Pope's question relative to the funding mechanism. When the Council identifies the state-wide priorities as those to be nested in the regions, it allows each region, through grants and partnerships, to solve problems and overcome obstacles without intervention.

A Council member asked if there was a closing date or deadline for providing framework feedback. Dr. Craig stated that specific feedback should be sent to her directly for document resolution in preparation for a Council vote at the June meeting. Ms. Lewis sees the need for the framework to demonstrate accountability and systematic roles and responsibilities of the Council, Regional STEM Centers, and support structures. She emphasized that areas of the State that lack crucial resources, such as central Louisiana, could really benefit from the framework. Jeff Holcomb is concerned about the funding mechanism and necessary oversight of the STEM Coordinator and this position's responsibility for bridging and sustaining funding. Mr. Holcomb would like to see an administering of this position through the State Department.

After meeting with Dr. Dunn in August, a representative from Southeastern Louisiana University stated that Regional Directors can work closely with Dr. Craig, share best practices, collaborate among regions, and share opportunities and strategies so underrepresented regions can benefit from the regions around them. Dr. William Wainwright added that clarity in the framework is going to balance autonomy and accountability. Building a strategic plan will address crucial gap analysis areas, particularly critical components such as STEM activities, donor alignment, and would like to see the framework move from functions to goals.

Dr. Pope asked how the Regional STEM Centers will be structured.

Ms. Schowen stated that communication with various regions regarding the process is conducted via workshops consisting of stakeholders from K-12, higher education, economic development, and workforce development--discussing their identity as a community, analyzing economic development, workforce development, and community values, and aligning these components according to goals and objectives. Conducting an analysis of assets and needs and leveraging according to existing reporting structures in each region will allow regions to evolve without standardizing according to the framework. The Council's accountability component

would be collaborating with regions to help them define and identify specific needs, thereby developing a strategic plan.

Referring to Janet Pope's earlier question, Dr. Lisa Smith-Vosper referred to *1. Establish Regional STEM CENTER (RSC), D. Development (Pursuit of Donors)*. She stated that this is exactly the central framework and structure based on the goals adopted by the Council Dr. Pope sought to clarify. The functions that follow are the goals to improve retention and skills, change STEM culture, etc. When visiting Lake Charles, Dr. Vosper reached out to the Regional Economic Development Organization (REDO), and they extended an invitation to those individuals and organizations within their footprint that dealt with STEM. There were a variety of groups at the table, such as McNeese State University, SOWELA, business and industry, etc. These groups sought to focus their regional efforts around various STEM efforts, needs, and foreseeable barriers. The State's vision for STEM is to ensure it's being administered equitably, opening opportunities for women and minorities, etc. The STEM regional coordinators who are facilitating and moderating conversations should be aware of the state-level goals and objectives provided in the framework. This allows for providing a context of the Council's accountability and how goals and objectives are evaluated.

Matthew LeBruyere, Board of Regents Associate Commissioner for Finance and Administration provided clarity to the language contained in Resolution 1, paragraph 4 and stated that a resolution is required to withdraw funds from Treasury. In the legislation, a LaSTEM fund was established and within that fund is another fund exclusive to grants and donations. In order to withdraw grant dollars and donations received, a resolution must be forwarded to Treasury on behalf of the Council. The resolution must also identify who has authority to withdraw funds on behalf of the Council. Dr. Reed recapped previous questions and asked if there are funds in both accounts. There are funds from a private entity in the subaccount in the amount of \$10,000 as a donation for the LaSTEM Summit held in September 2018. However, there are no appropriations that have been made to the main LaSTEM Fund. Dr. Reed asked for clarification. Relative to the previous "and/or" question, Mr. LeBruyere stated that it is his interpretation that Resolution 1 indicated "both parties" must endorse checks for authorization of transactions. Ms. Taylor White asked if Resolution 1 is for specific transactions, or does it provide an unlimited/general access to funds in the subaccount, with authorization as stated. Mr. LeBruyere stated that he will clarify this question with Treasury, but it is his professional opinion that Resolution 1 is the "will of the Council," and until the Council changes its will, it appears to indicate that Resolution 1 is a one-time resolution and not for unlimited/general access. Senator Hewitt did not expect Resolution 1 to be specific and exclusive to LaSTEM Summit transactions. Dr. Reed clarified that Resolution 1 will allow the Board of Regents to be reimbursed for LaSTEM Summit expenses from the LaSTEM subaccount. Mr. LeBruyere clarified that the name of the fund is **STEM Education Fund**. Senator Hewitt stated that the purpose of the subaccount was to separate private funds and donations from the dedicated fund so funds could not be removed or swept up by government access. Going forward, Senator Hewitt would like to implement a general Resolution allowing multi-purpose access to the subaccount with authorization as stated, correctly identifying the name of the fund as **STEM Education Fund**. Dr. Reed recommended that the Council approve the Resolution subject to the correction of the fund to accurately reflect the amount in Treasury,

and direct that a more general resolution with a broader mission for multiple purposes based on the Council's prioritization be brought forward at the next meeting.

On motion of Dr. Kim Hunter-Reed, seconded by Michael Gaudet, the Council voted unanimously to approve Resolution No. 1 as amended to accurately reflect the name of the fund as STEM Education Fund, authorizing members or officers of the LaSTEM Advisory Council to withdraw money from the subaccount of the STEM Education Fund; and that a general, multi-purpose resolution with a broader mission based on Council prioritization be drafted and presented at the next meeting for approval.

III. LOUISIANA WORKFORCE PIPELINE: SKILLS, OPENINGS, AND OPPORTUNITY – ALI R. BUSTAMANTE, PHD

Dr. Ali Bustamante, Chief Economist for the Louisiana Workforce Commission, provided a presentation gap analysis pertaining to STEM. There are significant gaps in the workforce and people need to be matched for these jobs. He listed the following four (4) challenges and opportunities:

1. Aging Population
2. Working Mothers
3. Wage Stagnation
4. Education and Training

Employment has changed drastically, and as a result, they have started observing those persons from different industries and occupations. He listed the following three (3) elements as reasons for job openings in the labor force: Some are new growth jobs, but not all of them.

1. New Growth
2. Exits/Retirements
3. Transfers/Turnover

The share of job openings on any given year is about 250,000 in Louisiana. These openings are coming from those who have either changed occupations or are leaving the workforce altogether—a mere 7% are considered new jobs. We must ensure the current labor force can transition into the jobs that currently exist in these STEM fields and we keep growing when it comes to new employment.

The Aging Workforce: The core of our labor force is the prime age workforce, which are ages 25-54. The prime age workforce population must be upskilled in STEM areas—there is K-12 and college level upskilling, but the prime age level must also continue to be upskilled. There

must be continued training and educational opportunities, while ensuring these same opportunities do not pull them away the labor force completely. The Louisiana Workforce Commission has apprenticeships and incumbent worker training programs for pursuit of upskilling.

Working Mothers: Approximately half of all women in the workforce have children which is approximately 40%. It's imperative, that among minorities, women are not excluded from STEM job opportunities. A huge component is ensuring that women with children have access to greater education, greater training, and employment in these fields. Issues working mothers face are child care, costs of child care, discrimination, lack of inclusivity in the workforce culture in STEM occupations and industry, and the broader idea that these families require more flexible work schedules.

Wage Stagnation: Wage levels have been stagnant since 2011. We must focus on attracting talent into STEM jobs and ensure that teachers and staff at K-12 and college levels who are training future STEM talent are compensated appropriately. We are competing with business & industry to ensure that we have the brainpower to foster this type of education.

Commuting Patterns: Most folks who live in Louisiana work in Louisiana. However, there is a share of workers who either live elsewhere and work in Louisiana or live in Louisiana and work elsewhere. Most of that transfer comes from Texas and Mississippi. We must ensure our sectors are competitive enough, and our talent does not have to leave Louisiana to seek employment opportunities elsewhere.

Education and Training: The labor force is substantially more educated than the population (as a whole). These groups, with respect to higher education, have considerably higher workforce participation levels than their lesser educated counterparts. There are two reasons: (1) selection—if you're going to college, presumably you're going to be more attached to the workforce. (2) Process—time and monetary costs involved make you more attached to the workforce. How can we ensure that we are leveraging opportunities to capture these individuals in higher education to nudge them into STEM fields? Approximately 40% of the labor force does have high school or lowers levels of attainment. Apprenticeships and on-the-job training exist and provide less structured/institutionalized ways of achieving STEM field jobs. Not only must we be willing and able to ensure that folks can enter STEM fields, but we must ensure these opportunities are worthwhile and these talents will benefit from pursuing the personal investments.

Mr. Yura asked Dr. Bustamante for additional information on exits after chart information demonstrated over 100,000 + a year jobs that need to be filled. Focusing on exits, do the transfers mean people have upskilled and moved into those jobs, thereby creating more entry level jobs for those people, or are annual exits being left unfilled because the workforce needed is not here? Dr. Bustamante answered that some of those transfers from one job to another are considered upskilling, and Louisiana Workforce Commission does have data on which occupations are ebbing or flowing. As pertaining to exits, they do not expect these folks to come back but do need to ensure that they will be replaced in one capacity or another. The bulk of the driver for these exits are retirement and to a lesser extent, a disability. They have

knowledge of where exits are occurring in terms of what industries and occupations. Louisiana Workforce Commission ultimately focuses on whether these positions are being filled or not being filled. Mr. Yura stated that the STEM proficiency needed as jobs evolve is going to be greater today than years ago. Therefore, the STEM literacy from pre-K through workforce must be increased, and the statistics provided will be beneficial to the gap analysis. Dr. Bustamante stated that the Louisiana Workforce Commission has data through a system called HIRE that allows them to match workers with employers and recruiters. This system provides a sense of which occupations have been on the market for a long period of time, who is filling them, and the educational levels and backgrounds of those going into these positions.

Ms. Taylor-White stated that permanent exiters in STEM fields usually do not have cutting edge skills requiring they be replaced. Those exiting due to retirement, death, disability, etc., are likely in positions being phased out of the current market. Jobs evolve and positions are upgraded and refilled to meet the current market and technological advances—new skills, development of jobs, and new growth. Dr. Bustamante added that people are also leaving the workforce for other reasons.

Mr. Yura stated that prioritizing leads to factoring the skills gap—indicating the number of jobs unfilled each year due to lack of technical skills. As phased-out positions evolve with a lack of trained people to potentially qualify, those positions are going unfilled. Where is the urgency to upskill populations of people whose jobs may be getting phased out, and help them fill those today requiring a different skill set?

Senator Hewitt asked for specific information on obvious gaps of those entering and exiting. Dr. Bustamante answered that the Louisiana Workforce Commission has data and intelligence on these gaps. They also produce star ratings (1-5) for occupations and incorporate openings. It factors the current Labor Market trends, locations of jobs not being fulfilled, and forecasts for these jobs (more openings or fewer). Wages are another essential element. The Star Ratings method is an entry point to have this discussion. They are published on an annual basis and provide long-term and short-term occupational forecasts. The short-term forecasts are two (2) years, the long-term are ten (10) years and these forecasts contain the intelligence being sought.

IV. LED GAP ANALYSIS: LA WORKFORCE SUPPLY AND DEMAND – SUSIE SCHOWEN

Ms. Schowen elaborated on the gap analysis by stating it is significantly different from last year's gap analysis report. There is a new methodology to the annual forecasts, and it significantly changes how exits and transfers are analyzed, thereby increasing the annual demand by "several fold." As a result, there is major change in the overall number of annual openings that the Louisiana Workforce Commission and the Occupational Forecasting Conference are projecting. This is a national change, and it is far more accurate based on feedback received from employers. There is a significant number of high attrition jobs and plenty of retirements, which were likely not being accurately reflected prior. As a result, there is a greater number of gaps and these gaps are substantially larger in size. The gap does not reveal a great deal of

information in a granular way. When interpreting the gap analysis, one must focus on trends and comparisons between gap numbers. Ms. Schowen discussed healthcare, education, and other essential services that must be filled in order to adequately maintain quality of life and an ability to recruit economic driver industries. There is an enormous gap in computer and information sciences, mainly driven by major growth in this industry in Louisiana, including 2000 additional jobs added by DXC, which were not reflected in last year's forecasts. While there is also a major gap in engineering fields, the gap is much larger in engineering technology fields.

Ms. Schowen indicated that four- and five-star undersupplied jobs are all STEM, including healthcare and education. High wage, high demand jobs have gaps due to economic growth in these areas and it is expensive and challenging for colleges to offer these programs and get students successfully through them. While there are gaps in other fields that occur for different reasons, typically low paid jobs with lots of attrition, it is important to focus on the reasons behind the gaps as we develop strategies to address them.

Ken Bradford asked how gaps align with the industry-based credentialing system in our statewide focus. Ms. Taylor-White stated that the Industry-based Credential Council (IBC) does take into consideration where the demand is and how high the demand is in the state. We have a general rule: if you cannot prove that you are providing employment in a demand occupation, high demand, high-wage, which entails three-, four-, and five- star jobs, we then raise serious questions. Ms. Schowen stated there is an opportunity to look at the IBC and identify some areas that are particularly high priority. Mr. Bradford added that it would be beneficial to the Department of Education and the school systems as a pathway—a culminating credential. This culminating credential is extremely high wage, high demand, high value for computer and information systems to help us make that alignment from IBCs to the coursework.

Dr. Wainwright stated that engagement with STEM driven industries is demonstrating the power impact of transferable skills, and this should offer great momentum with Regional STEM Centers. Ms. Schowen stated that structure and training programs start with transferable skills, dropping specifics at the end. There is also need for skills, such as interpersonal communications and platform speaking skills, outside of the traditional STEM landscape, but need to be deeply embedded in all curriculums.

Dr. Reed referred to Ken Bradford's questions relative to certifications and stated that the Board of Regents approved an undergraduate certificate so we can conduct post- and sub-baccalaureate work that is specifically aligned to the needs of industry.

V. 2019 GOALS DISCUSSION

Dr. Craig mentioned the following:

- LaSTEM Advisory Council meetings will be held in a quarterly fashion and the next meeting will be held in June 2019 at the Cyber Innovation Center in Bossier City;

- The LaSTEM Summit is expected to be larger than last year. A Summit Committee must be formed, and planning is needed to determine location for space;
- The LaSTEM Advisory Council will meet at the Claiborne Conference Center in December 2019; and
- There are plans for the LaSTEM Advisory Council to visit various regions as soon as Senator Hewitt, Dr. Reed, and Ms. Schowen can align schedules. One potential date is March 2019, and you will be notified when we plan to visit your region. We want to visit St. Tammany, Alexandria, and New Orleans. Regions are motivated to start and wish to provide support in tweaking framework.

Goals/Smart Objectives:

Dr. Craig discussed the following goals and smart objectives.

- Dr. Craig took goals and objectives from each subcommittee, such as pre-K-12, high school and post-secondary, and workforce and identified the goals and objectives that each committee designated to start in 2019. For pre-K-12, the LaSTEM Advisory Council wishes to continue with teacher training that the Department of Education has already begun—we confirmed over 400 have enrolled for training, and the number is still climbing.
- One of the pre-K-12 goals was to create a STEM guidebook, an online resource clearinghouse for districts, schools, and regions. The Department of Education is in the process of developing their guidebook and LaSTEM Advisory Council is interested in collaborating with them on this effort.
- The LaSTEM Advisory Council will continue to work with postsecondary institutions on engaging high school students and encouraging them to enter the teaching profession. We will also continue to work hand in hand with Kimberly Eckert, the former teacher of the year, to elevate the teaching profession and the teaching profession in STEM fields. The High School Postsecondary Subcommittee performed great work this year, and we will partner with them to explore any high-quality STEM pathways that need to be created. We will also partner with postsecondary institutions to build on the existing intensive instructional summer programs.
- The Workforce Subcommittee provided framework for development of Regional STEM Centers; they have asked us for support and that is our primary goal. We need to facilitate the conversation around our Regional STEM Centers by using existing partnerships and developing new ones where needed.

On motion of Tom Yura, seconded by Dr. William Wainwright, the Council voted unanimously to adjourn the meeting of the LaSTEM Advisory Council, effective 3:15 p.m.