

## **Non-Tenure Track Faculty Professional Development Opportunities**

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## Abstract

With the growth of academic programs to include online coupled with the requirement to provide full benefits to adjunct faculty who are teaching more than 9 credit hours in a semester, The Citadel, a primarily teaching focused college, has begun to shift from a nearly complete tenure track faculty to a faculty model with 25 percent of the faculty non-tenure track. This change in faculty structure has also been driven by the State controlling the number of full time equivalent (FTE) lines available which requires annual evaluation and approval of increased full-time equivalents while faced with increased enrollments.

Normally faculty development, presentation, and small research grants were limited to the tenure track faculty, but now the School of Engineering at The Citadel is providing for the first time this year these funds to non-tenure track faculty which not only improves the potential for a non-tenured track faculty moving into a tenure track line in the future, but also increases the overall faculty scholarship production (non-tenured faculty skills being pulled into scholarship), augmenting the quality of non-tenured track faculty activities as well as their future transportability (i.e., skill development) to other opportunities; thereby enhancing the entire program. The obvious downside is the spreading of already limited faculty development funds over an ever increasing faculty population.

The School of Engineering at The Citadel will outline its faculty development programs as well as co-teaching models that are producing a more cohesive department. Non-tenure track faculty changes will be presented, analyzed, and possible best practices being pulled from the current data.

## Introduction

Faculty development is normally self-directed if the faculty member is self-sufficient in obtaining funding. This works well for tier one research schools where success is built on average teaching and superior fund raising and scholarship production. These new faculty are given generous startup funds to support initiation of research (equipment, graduate student salaries, conference travel, faculty development, etc.). Consistently most funds are used to support equipment purchases, student researchers and faculty summer funding leaving little for professional development beyond attending conferences to present research, network, and/or learn about future research opportunities. In general, if the teaching is bad enough to rise to the attention of the department head or dean, additional funds are set aside to support teaching faculty development. Two of the best-known workshops for civil engineering faculty are the National Effective Teaching Institute (NETI)<sup>1</sup> and the ASCE Excellence in Civil Engineering Education (ExCEED)<sup>2</sup> Teaching Workshops. The School of Engineering at The Citadel uses the content within the ExCEED Teaching Workshop for teaching faculty development.

Based on the recent American Association of Colleges and Universities (AACU) Provosts and Deans list serve discussion (Fall 2016), the amounts for faculty development in small to

medium sized departments vary by university and range from \$500 - \$1500 per faculty member. In large research focused universities, faculty must generate their own development funds. In some schools, the faculty development funds are centralized at the Dean or Provost level and faculty submit a request. However, many programs have a small amount added to their operating funds to support faculty development opportunities. The amount is normally so small that many department heads either provide all a small stipend to cover some of the travel or consolidate to use for the greater good of the entire faculty as determined by the department head or a vote of the faculty. An example of the best use could be a teaching faculty development opportunity for new faculty since teaching is a primary focus at a majority of small to medium sized schools (an accepted faculty load model: 60% teaching, 20% scholarship, and 20% for service).<sup>3</sup>

The Citadel was established as a teaching focused school where teaching was 90-100% of the faculty load with normally some service or scholarship filling the balance of available time. This focus can be observed within the faculty handbook<sup>4</sup> where post tenure focuses on excellence in teaching and satisfactory activity in either service or scholarship. The faculty was over 90% tenured or tenure-tracked 10 years ago. In order to broaden the faculty with the available funding through The Citadel Foundation, which was established nearly 20 years ago, a faculty grant was established to provide funding for faculty development through the Provost's office. Faculty could apply through separate faculty led committees for \$3000 for research/scholarship, \$2500 for research presentation, and \$2500 for faculty development (workshop, conference attendance) per year. This program was marginally successful to support new tenure-track and some associate professors as they maintained a more balanced workload focus (closer to the 60-20-20 than the average norm for long-term faculty of 90-5-5). Suchan et. al. addresses the issues of faculty of high faculty turnover and describes the commitment required of the institution to implement a faculty development model.<sup>5</sup> Whether an institution is a research or teaching focused institution, there is an ABET requirement for faculty professional development (ABET, Criterion 6). Therefore, the School of Engineering at The Citadel implemented a school-wide faculty development model.

In recent years with the greening of the faculty through expansion of programs and retirements, the academic leadership team is moving all faculty to the more accepted 60-20-20 faculty workload model. While still feeling the effects of the recession on endowments and the need to support more research/scholarship and service by the tenure-track and tenured faculty, the nearly 95% tenured or tenured track faculty is being reshaped to be 75% tenured or tenure-tracked and 25% adjunct or lecturer (non-tenure track) over the next 5-10 years. With the recent requirement for development plans for staff, the School of Engineering immediately began discussions and implemented plans for non-tenure track faculty development.

### Current Faculty Development Model

There are numerous articles on the effect the recent recession had on decreasing state funding for higher education and returns on endowments. These forces resulted in a freezing of the availability of faculty development funds at The Citadel at pre-recession funding levels which the faculty led committees never knew existed. With the synergistic greening of the faculty, a

need to responsibly spread the available, limited faculty development funds, and the implementation of the new faculty workload model, the School of Engineering set up a faculty development distribution model in early fall 2013 to effectively use available financial capabilities and move toward a more self-sufficient faculty development model. A slight change to the available amounts were: up to \$3000 for one research/scholarship project, up to \$2500 for only one research presentation, and up to \$2500 for only one faculty development opportunity (workshop, conference attendance) per year and only with a **detailed professional development plan** established with the department head prior to the current year of funding. Additionally, new assistant professors could apply for one grant in each area, associate professors on track to achieving full professor could apply for two out of the three grants and full professors and long-term associate professors could only apply for one out of the three faculty development grants.

Initially the full and long-term associate professors expressed alarm at the loss of an expected college-wide benefit. However, further research into benefit use noted that it was only available for about 10 previous years to include the recession years and many of the faculty were not taking advantage of it. The allocations for the School of Engineering showed over a five-year period that the average annual amount used was approximately \$30,000 versus the possible full use in each area each year would have been \$144,000 or 20.8 percent usage of the theoretically available funds. In actuality, there were never enough funds to provide full use of the benefits by each faculty member, committees were simply not provided a budget until the recession years and the recession and faculty greening exposed the actual limitations of the Foundation faculty grant. Additionally, only a few faculty used more than two out of the three available grants. With the greening of the faculty resulting in more need for faculty development funds for promotion and tenure support (primarily teaching focused school), the available funds being allocated based on previous usage of funds left each school short on funds versus demand. Until additional fund raising can increase availability to overcome dramatic decreases in state funding due to changes in post-secondary education support at the state level and limited endowment growth, if any, during the most recent recession, the allocation plan presented in the paragraph above was initiated.

The use of this funding model as well as the emphasis of a 60-20-20 load model has had dramatic impact on research, scholarship, and student recruiting and retention. It could be assumed that limiting the amount of faculty funding would negatively affect the performance of the faculty. However, Boice stated that typical new faculty take approximately 4+ years to become productive in research and effective in teaching. With a good faculty development program that level can be attained in less than two years.<sup>6</sup> Figure 1 and Tables 1-2 depict the improvements during this time.

Currently there are 30 faculty in the School of Engineering with all but three teaching a four course/section load each semester. These three faculty are teaching a 3 course/section load each semester because they have been awarded a large research grant (NSF) or are consistently being awarded a number of small grants each year. Scholarship is classified using the following scale: 6 points for book/manuscript, 5 points for edited volume, 4 points for book chapter/book edition, 3 points for peer reviewed journal, 2 points for research/technical report, 1 point for peer reviewed conference paper and presentation, 0.5 points for non-peered

reviewed conference paper and presentation, 0.25 points for presentation only. The goal of this point system is to visibly increase the amount of scholarship while determining the average scholarship amount for motivational effect. All new faculty (15 since 2012) have attended a Mini-ExCEED teaching workshop taught by one of the authors and four of these have attended the week-long ExCEED. These same new faculty are the primary foundation of faculty modifying and invigorating the freshmen and sophomore courses. The institution tracks student evaluations by department and these new faculty are at or exceeding the departmental averages for each of their courses.

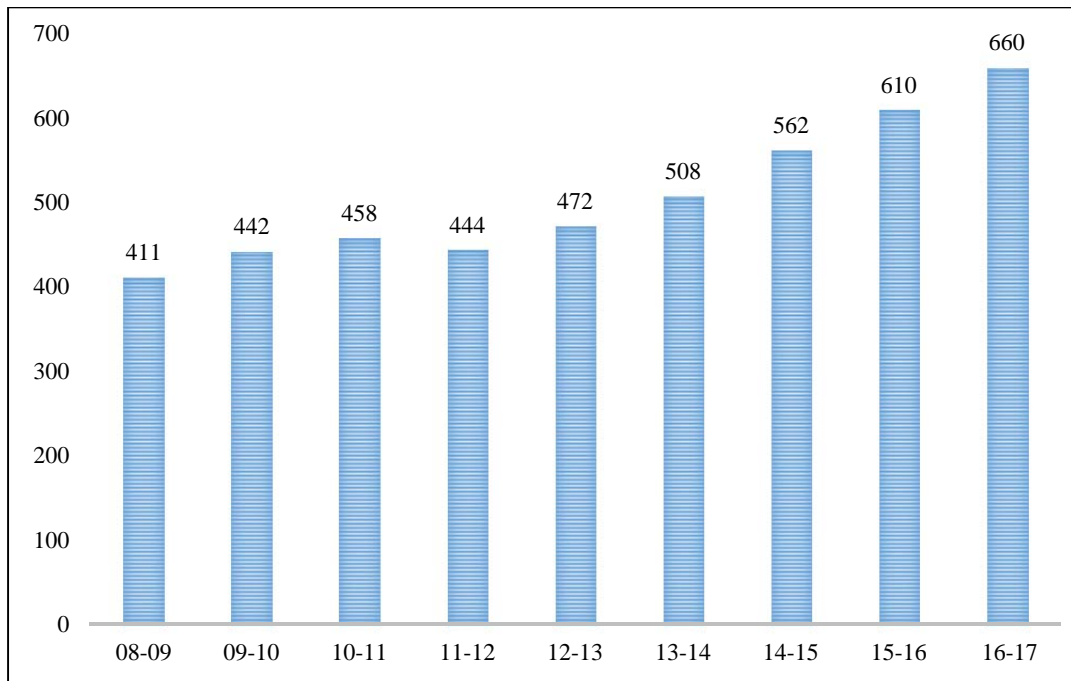


Figure 1. School of Engineering Undergraduate Student Growth from 2008-2016<sup>7</sup>

Table 1. School of Engineering Faculty Workload and Scholarship Production 2011-2016<sup>8</sup>

Year	Student Credit Hour/faculty	Advisees/Faculty	Scholarship Total School Wide	Scholarship Average/Faculty
2012	349.7	27.4	47.5	2.0
2013	358.7	30.5	41	1.7
2014	366.7	29.6	89.8	3.2
2015	374.2	29.9	101.5	3.7
2016	369.1	22.0	146.3	4.6

Note: Increased faculty by 12 since 2012.

Table 2. School of Engineering Faculty Research Proposal/Funding Production 2011-2016<sup>8</sup>

	Proposals Submitted	Requested Funding	Funding Expended
2011	0		0
2012	2		\$197,070*

2013	3		\$361,081*
2014	6		\$240,097*
2015	8	\$3.64m	\$161,077*
2016	11	\$7.906m	\$225,424

\*These funds are primarily from a NSF S-STEM grant submitted in 2010 and the internal grants for research (\$3000) noted above.

This growth while requiring professional development plans that match tenure and promotion goals have led to greater research proposal submission and funding, scholarship, and growth in student enrollment which has ultimately led to new faculty lines. The actual addition of the availability of these funds ten years ago did not generate the faculty development envisioned. The fact that the resources are now limited, the college is moving to a 60-20-20 faculty workload model, and an actual justification for applying for the available funds is required has generated more research, scholarship, and enrollment growth. A benefit of the increased research and student enrollment growth is the expansion of undergraduate research which has nearly quadrupled (Table 3 and Figure 2) even at a still teaching focused school.

Table 3. Undergraduate Research projects

<b>Semester/Year</b>	<b>Subject</b>
Fa10-Sp11	SC Dept of Transportation Pavement Marking Resender
Fa11-Sp12	Battery 2 Beach
Fa11-Sp12	Assembler for an Instructional Processor
Fa13	MathCad as Teaching Tool in Structural Analysis
Fa12-Sp13	Data & Image Compression
Fa12-Sp13	Wavelet Image Compression
Fa12-Sp13	Circuitry Temperature Experiments
Su14-Fa14	Roundabouts and Access Management
Su14	State Earthquake Assistant
Fa14-Sp15	Evaluation of an Ultra-Wideband Diplexer for Simultaneous UHF and X-Band Operation using Modulated Gaussian Pulses
Fa14-Sp15	An Effective Student Implemented STEM Outreach Program for Title 1 Schools
Sp15	Half-Wave Parabolic Reflector Antenna Optimization
Su15	State Earthquake Assistant
Fa15	Development of a Fluid Mechanics Concept Inventory for Civil Engineers
Fa15-Sp16	Roundabouts and Access Management
Fa15-Sp16	Student and Instructor Perceptions of a Supplemental Instruction Program
Fa15-Sp16	New Intern, How are we Going to Use You?
Fa15	Measurement projects using FPGA technology
Sp16	Code Study (Seismic Response Study)
Sp16	Drilled Pier Research
Sp16	Wave Dissipation System
Fa16	Radio Frequency Bandpass Filter

Fa16	AM Modulator and Demodulator
Fa16	FM Demodulator
Sp16-Fa16	Navigation of Pedestrians and Bicycles at Roundabouts and its Impact to Vehicular Capacity
Fa16	Introduce a Girl to Engineering Day: Assessment of Impact and Future Directions
Fa16-Sp17	Fragility Analysis of Residential Developments Subjected to Hurricane Wind Hazards
Fa16-Sp17	Effects of Transition Modeling on Clark Y Airfoil
Fa16-Sp17	Presenting a more efficient approach to teach Materials Science
Fa16-Sp17	Engineering Internships – Individual and Program Assessment
Sp17	Mini-roundabouts
Sp17	Signal Processing – High Speed Analog to Digital Conversion
Sp17	Adaptive Signal Processing

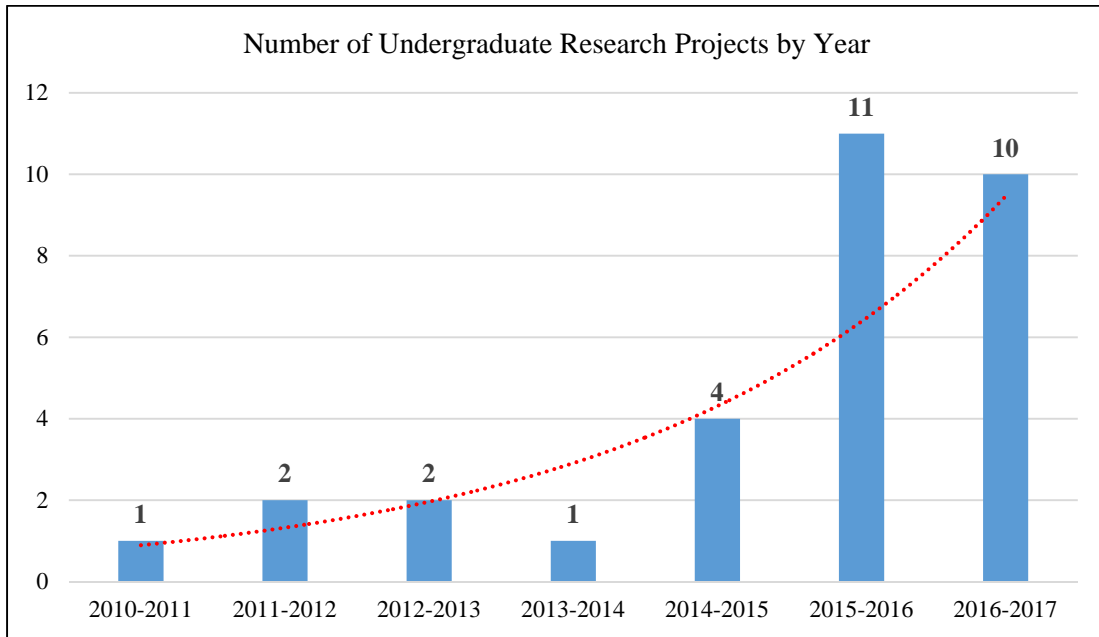


Figure 2. Number of Undergraduate Research Projects by Academic year

### Non-Tenured Faculty Development

The Citadel has had some non-tenured faculty for many years. In the last eighteen months, adjunct faculty who taught at least 9 credit hours each semester could apply for benefits (health, retirement, etc.) through the college. Many of the humanities and social science programs have a higher percentage of adjunct/lecturer faculty. The arrival of a new provost and fairly new Vice President for Business and Finance who oversaw the transition to benefits for heavily employed adjunct pushed for the new 60-20-20 workload model and use of more adjuncts. The institution's reputation is directly influenced by the activities of faculty outside the institution walls through more scholarship and service. To support less teaching by the tenured or tenure-tracked faculty more of the teaching load needs to be supported by

adjunct/fulltime lecturer faculty which led to the directed goal of a 75 percent tenured or tenure tracked faculty and 25 percent non-tenured faculty.

A review of the success (above) of focused development plans for tenured or tenure-track faculty is undeniable. Additionally, the School of Engineering has had limited use of adjuncts since most engineers in the area are fully employed and can only teach in the evening. This is beneficial since the School of Engineering has a full-time evening engineering program through a 2+2 program in association with the local technical college. However, the school works to maintain at least 70 percent of the evening courses being taught by full time faculty. Therefore, to meet the 25 percent non-tenured faculty goal, adjunct faculty or lecturers use must be increased during the day. With the associated student growth above, the timing is right to begin hiring full time lecturers/visiting professors to cover the increased teaching load since there is a lack of part-time faculty (adjuncts) to teach one or two courses during the day.

These full-time lecturers will be required to teach more and have a small service load (90-0-10 work load). Additionally, the staff are currently supported with annual training to support their development to include training not available on campus. With these facts in hand the leadership team has determined that full-time lecturers/visiting professors need to be supported with faculty development funds to improve their teaching capabilities and assist the current retention and recruiting efforts. Currently they are supported with only professional development funds (up to \$2500). If they do develop a scholarship capability with other faculty or individually, the department or school will also work to provide the necessary funds to support the presentation of the scholarship. The prevailing thought or ultimate goal is that an adjunct might be doing research with an associate or full professor and they will make the presentation for the team since the tenured faculty might need to be making multiple presentations throughout the year. Additionally, the full development of heavily employed adjuncts (>9 credit hours/semester) or lecturers and visiting professors can provide another source for future tenure-track faculty. Inside Higher Ed recently reported that non-tenured faculty members desire more compensated professional development.<sup>9</sup>

Another technique used with new tenure-tracked faculty is to provide a mentor or co-teach a course with them.<sup>10</sup> These same techniques are being use with non-tenured faculty as well. This models a Faculty Learning Community to build community, engage in scholarly teaching, and the further development of the scholarship of teaching and learning as discussed by Cox.<sup>11</sup> The ultimate goal of better prepared students' needs to be the focus for all funds provided for professional development and training opportunities, no matter what type of faculty title they may have.

The fulltime lecturer hired last year attended a FEMA workshop with the goal of inserting some of the disaster recovery structural analysis into the structural analysis course as larger real world analysis problems. The inclusion of the full-time lecturers within the funding that was only available to tenured or tenure-tracked faculty has been a very positive morale builder. The School is currently interviewing the second full-time lecturer hire and the offer included availability of teaching professional development funds. This includes the desire to send non-tenured fulltime lecturers to the same teaching workshops we send our new tenure-track faculty to at The Citadel, that is the one-week ASCE ExCEED Teaching Workshop.



The Dean who has been a part of the ASCE ExCEED Teaching Workshop for many years hosts a two day mini-ExCEED Teaching Workshop on campus every other year (see schedule at Appendix 1). All new tenure-tracked faculty hired since the last workshop must attend and an open invitation is provided to all engineering faculty and adjuncts as well as all STEM faculty on campus. Each year faculty from other programs attend as well as engineering adjuncts. This year one of the full-time adjuncts and one of the part-time adjuncts attended. Each noted that the content provided many necessary skills to be a successful teacher, but the fact that the leadership team (Dean and two department heads) was personally and actively working to improve their teaching skills was impactful. In addition, the openness of connecting new faculty with senior tenured faculty for the purpose of assessing each other's classes as part of the continuance of the workshop was exceptional and showed that **all** faculty were committed to improving the experience of their students.

## Conclusions

The data supports the best practice of requiring annual development plans for each member of the faculty. Even when small amounts of funds are available, their intentional use can provide impactful results whether the faculty member is a tenured, tenure-track, or non-tenure track faculty member. The Citadel School of Engineering has seen increased research, scholarship, and quality of teaching through strategic development plans for even the most senior faculty. This type of development activity does come at a price, but the end result is increased productivity of the faculty, increased research which many times includes undergraduates (proposals submitted and funding expended), and better engaged students in the classroom.

Any person who provides their services in the mission of the college or school or department deserves to be supported in developing the necessary skills to be the best employee possible. What is necessary is leadership that takes the time to ensure the annual assessment of each person includes a development plan which includes training and conference attendance to meet any noted weaknesses or deficiencies or to develop needed new skills for the future as the organization morphs to meet changing needs. Many times, we as leaders note the areas for improvement, but seldom place resources to actually develop the required skills. Another way to look at it, in many organizations it is difficult to remove someone. If training is provided and improvement does not occur, then removal is easier. However, this should not be the goal of professional development, especially for non-tenured faculty; leaders must project confidence in their hires and provide them the resources to accomplish the mission at desired levels. Sometimes the resources must be actual training, research, or presentation of results – even for non-tenured faculty. This type of development focus has resulted in both of the lecturers recently hired having a doctorate...is it because they can see the institution values them and their future?

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## Appendix 1

<b>SCHEDULE</b>
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**Thursday, January 5, 2017**

<b>TIME</b>	<b>EVENT</b>	<b>TOPIC</b>	<b>LEAD</b>	<b>REMARKS</b>
8:00-8:20	Assessment I	Introductions and background knowledge probe	Welch	Participants fill out a background knowledge probe and give to mentors. No names please (will try to do this prior to the workshop).
8:20-9:00	Seminar I	Teaching and Learning	Welch	Interactive period establish the need for effective teaching.
9:05-10:05	Demonstration Class I	Application of Fundamental Teaching Techniques	Welch	Truss Analysis I - A technical class to demonstrate teaching techniques.
10:05-10:35	Assessment II	Assessment of Demo Class	Rabb	Participants are led in the assessment of the demo class. This event sets the tone for assessment of future classes.
1035-11:00	Break			
11:00-11:50	Seminar II	Effective Learning and Teaching	Welch	Interactive period to introduce the elements of effective teaching
12:00-1:00	Lunch			
1:00-1:40	Seminar III	Speaking	Welch	Your voice as an effective teaching tool and eliciting positive emotion in the classroom
1:40-2:30	Seminar IV	Learning Objectives	Rabb	Learning objectives to communicate expectations to students
2:30-2:45	Break			
2:45-4:00	Seminar V Lab I	Planning a Class II: Board Notes	Welch	The preparation of lesson notes using the board note format.
4:00-4:15		Wrap-up and review of tomorrow's schedule	Welch	

## SCHEDULE

**Friday, January 6, 2017**

TIME	EVENT	TOPIC	LEAD	REMARKS
8:00-8:10		Announcements	Welch	
8:10-9:00	Seminar VI Lab II	Using the White/Chalk Boards	Welch, Rabb, Grayson	Writing to communicate, Effective use of various presentation media. Chalk Board Aerobics
9:00-10:00	Seminar VII	Learning Styles	Welch, Rabb, Grayson	The impact of learning styles on your teaching and your student's learning.
10:00-10:15	Break			
10:15-11:15	Demonstration Class II	Application of Fundamental Teaching Techniques II	Grayson	Trusses II - A technical class to demonstrate teaching techniques and to demonstrate how more techniques from the ExCEED model can be employed in the classroom.
11:15-12:00	Assessment	Assessment of Demo Class	Welch	Participants will prepare a formal assessment of a class
12:00-1:00	Lunch			
1:00-1:45	Seminar VIII	Questioning	Welch	Questioning to involve students and make contact with them
1:45-2:00	Break			
2:00 -3:45	Seminar IX	Non-verbal Communication	Welch	How to be a more effective communicator. Sending & receiving non-verbal cues
3:45-4:15	Wrap-up	Workshop assessment & Conclusion	Welch	