TTFAC is pleased to provide this final report of activities in support of its charge. TTFAC notes that many USC personnel’s ability to respond to inquiries were challenged due to the COVID-19 crisis.

TTFAC 2019-2020 was co-chaired by Thomas G. Cummings, Professor of Management & Organization, USC Marshall School of Business; and Velina Hasu Houston, MFA, PhD, Distinguished Professor of Theatre in Dramatic Writing, Director of MFA Dramatic Writing, Head of Undergraduate Playwriting, Resident Playwright, USC School of Dramatic Arts.

Besides Professors Cummings and Houston, TTFAC members included:

- Hossein Jadvar, MD, PhD, MPH, MBA, Associate Professor of Radiology; Associate Professor of Biomedical Engineering, USC Keck School of Medicine

- Raghu Raghavendra, Professor of Electrical Engineering and Computer Science, Vice Dean for Global Academic Initiatives, USC Viterbi School of Engineering.

- Sharon Cermak, Professor, USC Chan Division of Occupational Science and Occupational Therapy with a joint appointment with the USC Keck School of Medicine

- Hayoun Lee, PhD, Associate Professor of Molecular Microbiology and Immunology, USC Keck School of Medicine.

- Kathy Smith, Professor, John C Hench Division of Animation and Digital Arts, USC School of Cinematic Arts

- Rebecca Brown, Professor, Rader Family Trustee Chair in Law, USC Gould School of Law

- Aniko Imre, PhD, Professor of Cinematic Arts, Division of Cinema & Media Studies, USC School of Cinematic Arts

- Julie Posselt, Associate Professor of higher education, USC Rossier School of Education
▪ G. Tom Goodnight, Professor of Communication, USC Annenberg School for Communication and Journalism

▪ Ferol Mennen, Associate Professor of Social Work, USC Suzanne Dworak-Peck School of Social Work

▪ Natania Meeker, Associate Professor of French and Comparative Literature, USC Dornsife College of Letters, Arts and Sciences

COMMITTEE CHARGE

The charge for the committee is (from www.usc.edu, February 6, 2020): “The Committee on Tenured and Tenure-Track Faculty Affairs identifies, monitors, and evaluates specific issues of concern to tenured and tenure-track faculty, including but not limited to faculty governance, tenure, compensation, benefits, and professional development at all stages of their careers. It monitors compliance with the Faculty Handbook and with stated school policies of the schools or units as they relate to Tenured and Tenure-Track faculty. It makes recommendations to relevant Senate and University committees, and to the Academic Senate, concerning any policy issues that have an impact on tenured and tenure-track faculty.”

For the 2019-2000 academic year, the committee’s specific charge included:

▪ Developing recommendations for improving USC’s tenure process, including how we can increase the diversity of our faculty, and how we can better evaluate and consider innovative, interdisciplinary work.

▪ Examining the role of service in TT faculty loads and promotions, and the interrelated question of how we can better engage/interest our TT faculty in service.

▪ Considering issues faced by associate professors who wish to be promoted to full professors with regards to their respective academic units’ evaluation processes.

FINDINGS

Service, and Gender and Racial Diversity

The issue of service for tenure and tenure-track faculty is linked to other issues TTFAC considered, such as diversity and the promotion of associate professors to full professor. Circumstantially, USC service cannot be discussed without in tandem discussing gender and race at USC.

The American Association of University Professors (AAUP) demonstrated in 2011 that women associate professors spend significantly more of their time than men on teaching and service; one study identified this disparity as totaling more than 220 hours over two semesters. While TTFAC does not have data on such imbalances at USC, such inequity in service has a negative impact on the ability of female faculty and faculty of color to attain promotion. Furthermore, it adversely effects their overall sense of validation and satisfaction at the university.
While TTFAC is not charged with investigating RTPC faculty service at USC, the committee addressed this topic in the name of university shared governance on the part of all faculty members. The committee notes that the current promotion scheme for RTPC faculty incentivizes service, whereas TT faculty are generally encouraged to do as little service as possible, since this work is not rewarded institutionally or in a larger professional context, and can be detrimental to a TT faculty member’s ability to advance research. RTPC faculty (who represent a larger percentage of female faculty and faculty of color than TT faculty) are taking on additional responsibilities without greater institutional power or authority being accorded to them.

The committee notes that both gender and racial diversity drop markedly for faculty in the full professor ranks at USC. While this tendency is not unique to USC and indeed represents a nationwide trend, it should be of real concern to the university in its efforts to address diversity within faculty ranks. A significant body of research indicates that female faculty and faculty of color face additional service burdens that hinder their advancement to promotion, especially at the associate professor rank, which is characterized at USC (as elsewhere) by a sudden rise in service responsibilities after a period of being somewhat shielded from service as a junior, TT colleague. For germane research links, please see end notes.1

The USC diversity index clearly shows that faculty racial diversity is significantly lower than student racial diversity (http://oir.usc.edu/faculty-and-student-diversity/). The diversity index (chance that two randomly picked individuals have difference race/ethnicity) of USC students is 81% and that of USC faculties is 54%. It is important to have faculty that also reflects the larger student body. Such an approach supports USC values, innovation, and community; and strengthens global research.

Former Provost Michael Quickii supported diversity hires and provided matching funds up to $50 million for that purpose. Can administration provide evidence of impact of those funds on the diversity index across USC? Can RTPC hires qualify for these matching funds? The former Provost also required each USC unit to have a Diversity Liaison with five-year plans focusing on diversification of each unit; he also recruited Dr. Shaun Harper to lead the USC Race and Equity Center (https://race.usc.edu). When Dr. Harper arrived at USC in 2016, he stated, “Over the next five years, USC will amass a national reputation for its leadership on racial equity in the United States. Its Race & Equity Center will be the epicenter for interdisciplinary scholarship, resources, and meaningful activities that significantly benefit the University, other institutions of higher education, and the broader society.” (Source Senate Website Archive: https://academicsenate.usc.edu/files/2016/12/Provost-Academic-Retreat_Final2.pdf).

With regards primarily to gender diversity matters, Executive Vice Provost Elizabeth Graddy reported positive changes at USC over the past five years. The committee suggests that USC maintain statistics to support these and other diversity-related changes.

Persistent diversity challenges at USC include: ongoing pipeline issues affecting diversity and retention, such as emphasis on TT diversity hires and casting the net widely in general remains inconsistent across units; TT, post-doc, and Ph.D. retention has limited resources from the Provost’s office and needs incentives to remain at USC such as matching funds or retainers; and
more incentives are needed with regards to promotion from associate to full professor. For
 germane research links and contact information for key offices at USC, please see end notes.iii

Promotion Pathways from Associate Professor with Tenure to Full Professor with Tenure
Regarding promotion pathways from associate professor with tenure to tenured full professor,
TTFAC was unable to obtain data on the number of tenured associate professors at USC and the
number of years they were at that level prior to being promoted to Professor given COVID-19
matters.

For TT faculty, there is a clear path for promotion from assistant professor to associate professor.
Once that rank has been reached, there is a general understanding that faculty who have achieved
tenure will seek a full professorship in around six years; however, a number of faculty have been
at the tenured associate professor level beyond that time period and need clear timelines and
expectations for promotion to full professorship.

TTFAC examined the USC Faculty Handbook (2019, Chapter 4, Faculty Appointment,
Promotion, and Tenure; Faculty Committee on APT p. 16-17) and found no information on
timelines for promotion from associate to full. While each unit decides upon the readiness of its
associate professors for evaluation for promotion to full, the University Committee on
Appointments, Promotion, and Tenure (UCAPT) Manual (2017), notes that such candidates are
evaluated by UCAPT panels that make recommendations for promotion to the Provost.

Within units, TTFAC discovered that, while generally following USC guidelines, each unit
conducts its own process for promotion from associate to full, with different interpretations of
university guidelines. There also can be different processes even within units based on
departments or divisions. Here are two examples with regards to promotion from associate to full
professor.

At the USC Keck School of Medicine (KSOM), as reported by its Vice Dean of Faculty Affairs,
as of January 2020, KSOM has 1,927 full-time and 272 part-time faculty; 302 T/TT faculty
(15.6% of all full-time faculty); 56 Assistant, 63 Associate, and 183 full professors. The
approximate average time from tenured associate professor to tenured full professor is around six
to eight years; some, however, may never be promoted, although that number is small.
Typical reasons for this variation in time to full professor promotion are difficulties in
maintaining funding, difficulty of impact of research, and productivity. In cases where tenured
associate professors never become full professors, usually the reasons are the same as for
differences in timing: difficulty of sustaining funding, difficulty of impact of research, and low
productivity. KSOM defines tenure and its privileges in accordance with USC faculty handbook
definitions.

Another example is the USC Marshall School of Business (Marshall) (source: USC Marshall

2.6 Promotion to (Full) Professor
The UCAPT Manual (Section 4.2) states: “The promotion to full professor is based on
achievement rather than promise. The candidate should have made additional substantial
contributions that have had a significant impact in the field, beyond the contribution that earned tenure. . . . The candidate for full professor should have achieved recognition as an expert in his or her field at a national and international level.” Although promotion decisions involve reviews at the Departmental and School level, the final decision is made by the Provost. The Provost receives advice from UCAPT. Candidates should keep in mind that his/her home department plays a role in the decision, but is not the final decision maker.

A candidate for Professor is expected to have established a national or international reputation based on research, and to have made significant scholarly contributions since the last promotion.

In many respects, the criteria for promotion to Professor are similar to those for promotion to Associate Professor, except a higher level of achievement is expected. Two criteria are unique:

The candidate is expected to have mentored and enhanced the professional development of junior colleagues. Evidence in support of this might include co-authorship with junior colleagues and classroom observation.

The candidate is expected to have taken on leadership roles in the Department, School, University, or Profession. Evidence in support of this might include membership on key committees with significant accomplishments.

The process for promotion to Professor is also in most respects the same as for promotion to Associate Professor, except it takes place earlier in the year in order to meet the University deadline that is typically mid-October. A sample calendar is given in Appendix A.

The main differences are: (i) only tenured faculty members with the rank of Professor may participate in the Departmental meeting and serve on review committees, (ii) the Peer Evaluation Group report should address the candidate’s mentoring and leadership contributions.

**Interdisciplinary Research**

Several areas related to interdisciplinary research at USC were examined: (1) how interdisciplinary research is evaluated by USC in the tenure and promotion processes (particularly in terms of interdisciplinary research [especially that which is split evenly between two disciplines] and how it can be evaluated so that there is not a diminished view of the respective disciplines in the mix) and (2) if annual reviews in all units should include a question about whether someone’s research is interdisciplinary and ask the faculty member to explain how the research benefits each of the involved disciplines.

TTFAC reviewed the USC Faculty Handbook “Statement on Interdisciplinary Research and Joint Appointment”: “4-C (3) Joint Appointments A joint appointment between two schools or divisions of the University may be tendered if the faculty member will teach or conduct research in both schools. A tenured appointment may be made, however, in only one school. Promotion
to a higher rank for faculty holding joint appointments should be initiated by the school of primary appointment.”

Vis-à-vis this matter, TTFAC also reviewed the UCAPT Manual: “The University welcomes work that spans traditional disciplines. For candidates with greater than zero-percent joint appointments, UCAPT will automatically consider their work to be interdisciplinary. However, assistant professors on the tenure track are discouraged from having joint appointments of more than zero percent.”

TTFAC also examined the matter with regards to the USC Office of Research. According to that office, USC strongly encourages interdisciplinary research. TTFAC notes that the Office of Research is dedicated to “implementing USC’s strategic plan by building interdisciplinary research collaborations that address societal needs and by increasing the impact and prominence of our research. The office invests in research initiatives, promotes our research among sponsors, and provides services that ensure that USC achieves the highest ethical standards in its research.” (Source: www.usc.edu, February 6, 2020.) The website offers two points of contact for interdisciplinary research at USC: USC Stevens Center for Innovation and the USC Institute for Creative Technologies, both of which are science-focused, as are the funding opportunities noted for “USC Investigators” at https://research.usc.edu/for-investigators/funding/usc/ (about 98% science-focused). That means that any faculty members at USC’s six art schools (or any other unit) who engages in interdisciplinary research will not find either the USC Stevens Center for Innovation or the USC Institute for Creative Technologies helpful resources to support their interdisciplinary research interests.

The committee examined several faculty issues related to interdisciplinary research and wondered how many faculty members who come up for tenure are truly interdisciplinary? We define “truly” as research that is evenly split between two or more disciplines.

Because interdisciplinary research is conducted in all institutes at USC, TTFAC took a closer look at one of these institutes, the USC Institute for Creative Technologies (ICT).

ICT conducts interdisciplinary research with technology and other areas such as medicine, science-related arts, and learning. Established in 1999, ICT is a Department of Defense-sponsored University Affiliated Research Center (UARC) working in collaboration with the U.S. Army Research Laboratory. UARCs are aligned with prestigious institutions conducting research at the forefront of science and innovation. ICT brings film and game industry artists together with computer and social scientists to study and develop immersive media for military training, health therapies, education and more. Research projects explore and expand how people engage with computers through virtual characters, video games, and simulated scenarios. ICT is a recognized leader in the development of virtual humans who look, think, and behave like real people. ICT has an artificial intelligence-based application for dealing with mental health issues. It supports people who may be facing mental issues, providing some replies and engaging in conversation. ICT research on virtual reality and applications in health areas is ongoing and strong; it includes such foci as telemedicine and the practice of surgery. Primarily used for military training, the institute conducts research on use of scenarios to
teach new languages and behavior in social settings. These areas all are interdisciplinary research related to technology, education, and behavioral sciences. ICT is primarily funded by a U.S. Army contract and federal agency funding. Most of its researchers are in the computer science discipline with research faculty appointments in the USC Viterbi School of Engineering and other USC units.

An area of new and effective interdisciplinary research germane to the current COVID-19 crisis with on-line teaching and learning is Captivating Virtual Instruction and Training (CVIT). The goal of CVIT is to develop a comprehensive strategy for educators and courseware developers when designing, producing, and deploying remote course material. The strategy is a technique-to-technology mapping that aligns successful instructional techniques used by live classroom instructors (humor, motivation, tone, pace) with core-enabling technologies (virtual humans, casual games, augmented reality, intelligent tutors, and narrative-driven experiences) so that distributed learning content may be delivered with not just educational value, but emotional impact and user captivation.

The USC Provost’s office reports that no statistics are kept on the number of tenure-track and tenured faculty members who have more than one academic unit paying their salaries. Therefore, there are no available statistics on the percentage breakdowns, whether or not they are joint appointments (paid or courtesy), or whether or not evaluations of such individuals are shared between main and subsequent units. The same office reported that it does not track statistics on the number or kinds of institutes at USC, which means that they have no data on the number of institutes in existence, how they operate, whether or not members or leaders are paid, or whether or not they are extensions of a unit or free-standing entities.

Many universities treat interdisciplinary research and scholarship as central to their strategies and missions. For example, at Cornell University: “Graduate study at Cornell is interdisciplinary by design. Fields span departments and even disciplines. Graduate students are admitted to fields of study, which are composed of faculty members who come together around shared intellectual interests and may draw from different campuses or colleges.” However, lack of support for interdisciplinary research in meaningful ways that have an impact on promotion and on the embrace of a faculty member’s research hampers this centrality in real terms.

For sources concerning interdisciplinary research, please see end notes.iv

RECOMMENDATIONS

Regarding Matters Related to Diversity and to Service

In short, service needs to be institutionally rewarded for T/TT faculty, and attention needs to be paid to the funneling of RTPC faculty energies into service without addressing their relatively greater institutional vulnerability.

- The way in which service is institutionally recognized needs to change. Currently, the Faculty Handbook (2019-20) defines faculty responsibilities as such:
“Faculty discharge these responsibilities through teaching, research, and service. The average activity profile of a full-time tenure-track or tenured faculty member is approximately 35-45% each of teaching and research and 5-15% of service. (Some schools prefer to express the average profile as 3/9 – 4/9 each of teaching and research and 1/9 of service.) Although actual percentages may vary depending on the needs of the faculty member's academic unit, it is expected that each tenured and tenure-track faculty member will make a significant contribution in each of the three areas of responsibility, except that a research-only profile for a tenured or tenure-track faculty member may be established, only on a temporary basis and only with the Provost’s approval”. (p. 34)

▪ The Faculty Handbook (2019-20) defines service as such:

“Service includes effort on committees and other activities at the departmental level through the University level. Depending on the field or discipline, this effort may include work outside the University. The responsibility to share in the management of the academic enterprise through service on University committees rests on all faculty, of every track and every rank, full-time and part-time, understanding that in elections and appointments the wishes, expertise, and other time commitments of the individual will be taken into account”. (p. 36)

▪ USC needs to ensure that service responsibilities are distributed more equally and equitably among TT faculty. The Provost should mandate that individual units formally incorporate into their hiring and promotion guidelines the expectation of demonstrated commitment to service. This should apply as much to junior professors as to established “star” faculty. The guidelines should disapprove trade-offs that would exempt certain faculty from service and should discourage the posture of “learned helplessness” adopted by some faculty to evade service responsibilities, which routinely shifts that burden to the handful of “capable” faculty, typically mid-career faculty of color and female faculty.

▪ Service needs to be incentivized by acknowledging it as a part of promotion. The Handbook currently does not even mention service as part of a candidate’s review profile:

“Candidates for promotion and tenure should supplement their curriculum vitae with a personal statement outlining their accomplishments and goals in teaching and research and candidates for appointment from outside the University should do so whenever feasible”. (p. 69)

▪ Service needs to be expected and quantified more rigorously as part of merit review and the UCAPT review, along with teaching. This requires that deans, in collaboration with their faculty councils, develop expectations and evaluation rubrics specifically to assess service. These expectations and rubrics should be consistent among schools to the extent possible.
▪ Associate Deans of Diversity and Inclusion (and any unit diversity liaisons with other titles) should participate on job searches within their units and oversee selection of candidates.

▪ Preferably funded by the Provost, research associates, junior TT faculty, post-docs, and terminal degree students (MFAs and PhDs) should be recruited and funded to work directly with the USC Race and Equity Center on behalf of each unit for two-year terms.

▪ Once the hiring freeze is lifted, USC must support diversity hires and more junior faculty across the campus with intentionality to strive to cultivate diversity in what otherwise could be a tilt back to privilege and experience over potential.

▪ Unit diversity liaisons need to meet every three years with all program chairs/directors, including tenured faculty, to review overall department diversity and junior faculty hires.

▪ USC should consider initiating scholarships for under-represented ethnic minority graduates to pursue PhDs or MFAs at USC or other institutions. An example is a college dean helped a group of under-represented ethnic minority graduates to pursue their academic careers, thus increasing their chances to be hired as a faculty.

▪ In professional schools including arts schools, USC should provide post-graduate fellowships for terminal degree MFAs to continue research and build relationships in support of research, curriculum, and pedagogical innovation.

▪ Deans and Chairs need to be more mindful of service duties, and support assistant and associate professors for promotion. Full professors should be encouraged to do more service with incentives such as course relief or acknowledgement in merit evaluations.

▪ Program chairs/directions should be full professors. This helps to motivate faculty and provides incentives for assistant and associate professors in their promotion pathways. All units should be brought into compliance with this guideline.

▪ Candidates applying for tenure appointments, tenure-track, or RTPC positions at USC should be required to provide a statement on diversity and inclusion, which program chairs/directors should consider.

▪ Relationships and research collaborations for junior faculty and ethnically diverse faculty should be developed across units.

▪ USC should consider trans-disciplinary hires, for example, an economist who is faculty at both Marshall and USC Dornsife College of Letters, Arts and Sciences (Dornsife).
▪ USC units should eliminate top-down structural issues, and create communication between junior and senior faculty.

▪ USC should encourage community and diversity across faculty, students, and staff via such means as field trips or collaborative research. Wrigley Institute for Environmental Studies and Cinematic Arts field trips and collaborations are an example.

▪ Deans and units should increase coordination to attract diverse and inclusive hires.

▪ Reviews by the University Committee on Academic Review (UCAR) appears to occur every seven to ten years with similar concerns addressed. USC and its Deans should make changes apparent.

**Regarding Matters Related to Promotion from Associate Professor with Tenure to Full Professor with Tenure**

▪ UCAPT offers a workshop regarding the promotion pathway from associate professor with tenure to full professor with tenure. TTFAC suggests that it offer an on-line workshop on the topic that is recorded and updated as the process changes so faculty can review it when they so desire and not have to wait for a yearly in-person workshop. The recording should be made available to deans and program chairs/directors.

▪ A homogenous approach to promotion to full professor across academic units will enhance transparency and faculty morale.

▪ Unique unit promotion characteristics should be made available to all faculty within units so that there is communication and understanding across departments/divisions.

▪ Regarding sciences faculty, TTFAC recommends examining promotion inequities between TT and clinical faculty and considering competing demands on tenured faculty to remain funded and productive (to secure promotion) while dealing with increasing clinical activity.

**Regarding Matters Related to Supporting Interdisciplinary Research**

▪ Beyond programs such as the Zumberge grants or Arts in Action, the taskforce recommends that USC create incentives for interdisciplinary research that are available to the entire faculty. Currently, when a faculty member who conducts interdisciplinary research is reviewed for tenure, a scholar from the secondary/subsequent unit joins the tenure review panel so that the non-main discipline is represented in the evaluation discussion. A recommendation that might improve upon that model is that the review panel members reflect the dual or multiple disciplines proportionately, i.e. a scholar
whose research is split equally between two disciplines should have a review panel whose members are split equally between the two disciplines.

- Another recommendation is that a faculty member who conducts interdisciplinary research should have an interdisciplinary review team consisting of members from both units, with both mentoring that faculty member in preparation for USC evaluation.

- Another recommendation might address the need to provide a much more overarching and integrative structure for organizing and focusing the disparate interdisciplinary research that currently exits, much like the universities in the Appendix.

- Another possible recommendation is that the Provost office and the Office of Research recognize and support interdisciplinary research, not only in the sciences, but also in arts and humanities. Historically, the Provost office and Office of Research have focused mainly on scientific and technological research. That means that they could only illuminate and support interdisciplinary research in those areas. They have never embraced arts research, for example, so if a professor's research was interdisciplinary between, let's say, music and architecture, the Provost office and Office of Research might not be that helpful or supportive.
END NOTES

i From the AAUP, on “The Ivory Ceiling of Service Work”
https://www.aaup.org/article/ivory-ceiling-service-work#.XrG9BZp7m7M

From Inside Higher Education, a summary of recent research on service inequities and gender:

From The Atlantic, on race, faculty diversity, and promotion and tenure:


ii Diversity and Inclusion at USC 2015-2020, Retreats and Program examples:
https://www.breakingtheglassframe.com/home

iii Important Links: http://oir.usc.edu/faculty-and-student-diversity/,
https://www.marshall.usc.edu/about/diversity-equity-and-inclusion,
https://gould.usc.edu/students/diversity/, https://diversity.usc.edu/,
https://diversity.usc.edu/diversity-liaisons/, https://academicsenate.usc.edu/progress-on-diversity-and-inclusiveness-initiatives/. Contacts and Sources: Dr. Dana Irwin, Director of Faculty Affairs, Academic Affairs email: danairwi@usc.edu; Dr. Shaun Harper, Provost Professor of Education and Business Rossier School of Education email: sharper@usc.edu.

iv INTERDISCIPLINARY RESEARCH AT UNIVERSITIES:

CORNELL UNIVERSITY
https://www.cornell.edu/academics/fields.cfm

Graduate study at Cornell is interdisciplinary by design. Fields span departments and even disciplines. Graduate students are admitted to fields of study, which are composed of faculty members who come together around shared intellectual interests and may draw from different campuses or colleges.

STANFORD
https://interdisciplinary.stanford.edu/

Stanford has 18 designated independent laboratories, centers and institutes, that provide a physical and intellectual intersection between schools and disciplines. These interdisciplinary
institutes are in line with Stanford's longstanding tradition of crossing boundaries to tackle large problems, engaging faculty and their students in collaborations that range from international and economic studies to challenges facing the environment, energy and health.

The designated independent laboratories, center and institutes are directed by the Vice Provost and Dean of Research, Kam Moler.

DUKE
https://sites.duke.edu/interdisciplinary/about/

At Duke, our faculty, research staff, and students connect research and education with active community engagement. Rich collaborations are taking place all across campus, both within and across academic disciplines and schools.

The Office of the Vice Provost for Interdisciplinary Studies provides central leadership for the university-wide interdisciplinary units—a cornerstone of Duke’s commitment to inquiry across disciplines—and runs the Bass Connections program, which brings together faculty, graduate students, and undergraduates to tackle complex societal challenges in interdisciplinary research teams.

Interdisciplinary studies has been a strategic focus at Duke University for more than 25 years. (See Timeline: Interdisciplinary Studies at Duke.) The most recent strategic plan (2017) reaffirms that interdisciplinarity comprises an integral part of Duke’s identity.

Key documents in the development of the culture of interdisciplinary engagement at Duke include:

- **Interdisciplinarity at Duke: A Brief Inventory of Connections among Schools and University-wide Institutes, Initiatives, and Centers** (2018)
- **Interdisciplinary Studies at Duke: Context, Commitment, and Challenges** (updated 2011)
- **Strategic Plan for Interdisciplinary Studies** (2010)
- **Strategic Plan: Making a Difference** (2006)
- **Crossing Boundaries: Interdisciplinary Planning for the Nineties** (1988)

NEW YORK UNIVERSITY
https://steinhardt.nyu.edu/centers-and-institutes

Centers and Institutes create opportunities for interdisciplinary, externally-funded scholarship among a large group of faculty across academic units.

The Music and Audio Research Laboratory (MARL)

Center for Practice and Research at the Intersection of Information, Society, and Methodology (PRIISIM)

The Metropolitan Center for Research on Equity and the Transformation of Schools (Metro Center)
The Consortium for Research and Evaluation of Advanced Technologies in Education
Center of Health and Rehabilitation Research
The Institute of Human Development and Social Change

The Learning Analytics Research Network (LEARN)

Center of Health and Rehabilitation Research