

**Administrative Response to the Research Assessment of the Research Programs  
Creative Computing and Language, Communication and Cognition 2018  
Department of Cognitive Science and Artificial Intelligence  
Department Communication and Cognition**

**By the Board of the Tilburg School of Humanities and Digital Sciences**

Determined by the Board of TSHD on May 7, 2019

On December 14, 2018 the site visit for the research assessment (review period: 2012-2017) of two research programs took place, namely the Creative Computing (CC) and the Language, Communication and Cognition (LCC) program, respectively. These programs were based in the former *Department Communication and Information Sciences*' (DCI) of the *Tilburg School of Humanities and Digital Sciences* (TSHD). The committee that conducted the review formulated its findings and recommendations in their report. The Board of TSDH very much appreciates the thorough and constructive comments of the committee as documented in their assessment report, and is pleased to learn that, besides some critical remarks, the committee is overall very positive about the two programs. At the request of the TiU Executive Board, the TSHD Board shares its reactions to the conclusions and recommendations of the committee for the research program Language, Communication and Cognition below.

**Background**

During the period under review, the research for both the CC and LCC programs was based in DCI, within the framework of the Tilburg Center for Cognition and Communication (TiCC). TiCC was established in 2008 and in 2015 became one of the five Centers of Excellence at TiU. Within TiCC, CC concerns itself with the computational modelling of cognitive processes in the visual, linguistic, and ludological domains. LCC explores cognitive, functional and social aspects of human communication through a multidisciplinary approach for a broad variety of domains. Given that CC and LCC had a joint past, but have recently decided to direct their research in separate directions, the assessment committee would partly review common aspects of the programs, but would primarily zoom in on program-specific features.

The research evaluation was conducted by an international committee, under chairmanship of Prof.-em. Dr.Ir. John Nerbonne (University of Groningen) and vice-chairmanship of Prof.Dr. Joseph Walther (University of California at Santa Barbara). The other members of the committee were Prof.Dr. Arthur Graesser (University of Memphis) and Prof.Dr. Catherine Pelachaud (Centre national de la recherche scientifique and Sorbonne University). Prior to the site-visit, the committee was provided with a self-assessment report and additional relevant information concerning the program. In order to do justice to the common and specific aspects of the two programs, the site visit consisted both of general sessions with representatives of both programs, as well as parallel sessions. Professor Walther and professor Pelachaud accepted the invitation to be in charge of focusing on the assessment of the LCC program, in close contact with the other committee members who would deal with the CC program.

The assessment of the committee is described in a report that was offered to the Board of TSHD on March 12, 2019. In this report the committee described its findings according to the Standard Evaluation Protocol (SEP) 2015-2021. The committee based its assessment on the SEP five-point scale *world leading/excellent* (1), *very good* (2), *good* (3) and *unsatisfactory* (4) regarding the aspects *research quality*, *relevance to society* and *vitality*. Following the SEP, the committee also included the PhD training program, research integrity and diversity in its assessment.

Below you will first find the recommendation and feedback provided by the committee, followed by the reaction of the program leaders, and of the board of TSHD in cases where further clarification is needed.

## **Assessment Creative Computing<sup>1</sup>**

### **Quantitative assessment**

Research quality:	2
Relevance to society:	1
Viability:	2

### **Research quality**

According to the committee, the CC group is very industrious and ambitious in terms of the width of its research areas within human and artificial intelligence. Given the ambitions the committee was slightly concerned regarding the feasibility of this approach based on the current staff size. Fortunately, more positions were created recently and are anticipated in the future. Despite this growth a better focus is required to compete with comparable programs. Besides this, CC should be mindful of the large budgets and colleagues of other programs so it can have realistic ambitions.

#### *Response program:*

*The CC program is undergoing a rapid growth. The profiles of the new hires are predominantly dictated by the educational program requirements. Having said that, the CC program has a very clear focus in mind on research topics related to interactive technologies and human behavior (including AI, virtual reality, and digital society). Our focus will be formulated more explicitly in the coming year in the CS&AI research statement.*

#### *Response Board:*

*The TSHD Board is pleased to see that the research program in the young department is vital and growing, not only due to the topical and ‘popular’ research but especially to the enthusiasm and efforts of its members to pursue high-quality research. The group is encouraged to focus on doing research related to the three impact themes of the university and naturally adjust this to the research topics within CC’s existing and future collaborations.*

The self-assessment report mentions that CC has a different methodology from the other research groups in TSHD (in terms of developing computational models and focusing on data science and AI rather than communications and culture studies). As a response, the committee points at the rise of digital humanities in the last decade and invites the program to articulate the foundations of CC beyond the local situation and onward to an internationally distinctive direction.

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<sup>1</sup> As of 2018, the group Creative Computing proceeds as the group Cognitive Science & Artificial Intelligence (CS&AI). This coincides with the start of the new Department CS&AI. In this document the name Creative Computing is predominantly used in retrospect, to refer to the research group during the assessment period 2012-2017. CS&AI is used to refer to the period thereafter.

*Response program:*

*The CC group is very familiar with digital humanities and actively contributes to it. In fact, it led the e-Humanities program in the School of Humanities in 2014. However, the developments in AI, virtual reality, and digital society are sometimes related to, but seldom specific for digital humanities. That is, an independent department and research agenda is needed to safeguard the methodological and scientific foundation for the future. We will articulate our foundations in an internationally distinctive direction in the aforementioned research statement.*

*Response Board:*

*Apart from the legitimate view on international developments and the awareness that CC should follow those developments, the Board also finds it important that the group seeks connections within TSHD as well, to strengthen the unique combination of humanities and digital sciences.*

As mentioned, the program members are very industrious, which also results in a strong publication record, both in terms of journal articles and conference papers. The latter contribute to CC's visibility and timely knowledge dissemination in order to attract funding. The high H-indices of a large share of the group members are also beneficial in this regard. Besides the publications, the program produces useful products for peers (source code for linguistic tasks, machine learning algorithms and datasets for distribution). The committee advises to start monitoring the use of its products for peers systematically. The program should also consider sharing its innovative advances with colleagues and other actors to scale up its contributions. Based on the useful demonstration of its products during the site-visit the committee stresses that the research questions of the projects should be articulated clearly. The program's researchers should be able to identify the needs of colleagues and customers, in line with software standards. According to the committee, university administrators also need to play a role in this process that is required to move forward in this century.

*Response program:*

*The CC program will start monitoring the use of software products for peers systematically.*

The committee applauds the funding that the program was able to secure for projects with partners in- and outside academia and recognizes its role in attracting funding for large-scale projects. For a better balance in funding the committee advises the program to also apply for very selective funding programs of NWO and ERC.

*Response program:*

*The CC program has been actively pursuing grants in NWO and ERC programs, with several successes outlined in the report.*

*Response Board:*

*The Board recognizes the efforts of the program leaders and is pleased about their pro-active position in that respect.*

In its assessment the committee vouches trust in the program's management and mentions the promising potential of the younger members who are establishing themselves in their field. The committee was pleased by the diverse marks of recognitions for the CC research that were described in the report, from participating in program committees for important conferences and workshop to memberships of editorial boards of leading journals and the reception of several awards that demonstrate both the scientific and societal impact of the research.

## **Societal relevance**

According to the committee, the program has been very active in outreach activities, such as popular lectures, educational events and producing educational materials and software packages that can be used by others, also outside academia. CC members have often appeared in national

and occasionally in the international media to display their work or share their expertise. Besides that, it is impressive that two patents were obtained in the reporting period.

The committee was very much impressed with the role CC has played in setting up collaborations with different parties (such as in education, industry and media) to channel scientific expertise into products and services that are useful to society at large. CC has been instrumental in founding important institutes to this aim: the DAF technology lab, Mind Labs and last but not least the collaboration between Tilburg University and Eindhoven University of Technology in JADS. All these activities were enabled by an astounding amount of external funding, which was obtained due to the diligence of the CC staff.

Besides funding the efforts and successes of the group have been acknowledged and awarded by societal partners. The new research program already received funding from a large number of societal groups and several members received evident marks of recognition such as awards, memberships of prestigious organs and invited talks.

Although the committee applauds the ambitions of CC for the future, it recommends the group to formulate more concrete and specific targets to get a better focus and make the goals more feasible.

*Response group:*

*We are happy with the committee's recognition of our work.*

## **Viability**

In the reporting period CC has had a solid publication record and has been productive in terms of products for peers and others outside academia. The success rate in obtaining external funding (sometimes in collaboration with societal partners) is impressive. The program clearly took the recommendation of the previous assessment committee to heart to find more societal partners (in local industry) and try to obtain more funding from EU-sources. The leadership of the program is fit to its task and has managed to overcome the departure of important members. The less-senior are satisfied with the facilities that are at their disposal and the relatively non-hierarchical nature of professional relations within the group. The committee only heard one complaint that personal computing facilities were not up to par and stresses that no institute with ambitions of excellence can afford to ignore this.

*Response program:*

*The complaint seems to be related to an incidental delay in the delivery of desktop hardware by LIS and does not pertain to our extensive computational research infrastructure.*

*Response Board:*

*The Board of TSHD obviously finds it important that professional support regarding hardware and software is guaranteed.*

Given the research topics, CC has outstanding opportunities for the future, both related to the research within the three new institutes and the impact themes of the university. Despite the great potential the committee was somewhat concerned because of the relatively small size of the program, which makes it vulnerable. This was also reflected in the program's SWOT-analysis. During the site-visit the committee was assured that the program already increased in size (notably in 2018 – just after the reporting period) and that more opportunities to expand would be forthcoming.

*Response program:*

*We agree with the committee that expansion of the program is necessary to achieve a stable situation.*

*Response Board:*

*The Board of TSHD is aware of the issues of personnel of the program, and is continuously looking for ways to meet the needs of the program within the financial constraints of the school.*

The committee met enthusiastic members of the group during the site visit and leadership that is confident in the viability of the program for the future. Despite this, the committee identifies several risks for the future. The first is a possible shift from the general popular interest in AI and data mining to other areas or to a sharpened focus in one or both of these. The potential competition of the established technical universities is another risk. Although CC is clearly filling a local need in an excellent way it is not clear whether the work can enable the group to excel on a global scale.

*Response program:*

*The CC group is very well aware of the likely decrease in interest for AI. However, the underlying trend of a highly digitized society is unlikely to go away any time soon. The CS&AI program's focus is on the combination of technology (AI) and humans (Cognitive Science), from a science perspective. In that respect, the program's target is unique and differs markedly from those of established technical universities.*

*Response Board:*

*The Board also would like to stress its wish that the CC program is connected and embedded in the school at large, in order to exploit possibilities to combine digital sciences with the field of humanities that would lead to innovative and creative forms of collaboration that has the potential to make our school unique.*

## **PhD Program**

Most of the graduated PhD candidates find a job in research (in academia or more applied in industry), which shows the quality of the training. Many of these PhD candidates take an inordinate amount of time to complete their degrees. Although interdisciplinary fields may require more time to complete a PhD this gives reason to revisit the time course of the PhD training.

*Response program:*

*Many of the 'delayed' PhD candidates actually get a teaching contract before finishing their dissertation. They combine teaching with writing their manuscript. This is not accounted for in the PhD success rate table.*

*Response Board:*

*The calculation of the PhD success rates is based on the enrollment period in the Graduate School from the registration until the thesis defense. This does not take into account part-time appointments or teaching contracts at a later stage. Consequently, PhD candidates may extend their contract without factual 'delay' in their trajectories.*

In general, CC PhD candidates are satisfied with the facilities offered, access to supervisors and training possibilities. Not all PhD candidates were aware of the course available to them (both in TSHD such as the ethics course, as at the national Graduate Schools such as SIKS or LOT). Moreover, not all PhD candidates were aware of their own personal training and supervision programs. More consistent communication and monitoring of the candidates is required to ensure that all candidates can benefit from the available offer.

*Response program:*

*The CC program recognizes the need for a more consistent communication, and is putting procedures in place to achieve that.*

*Response Board:*

*TSHD has taken several measures to prevent delay in the trajectories, such as the monitoring talks that have been set up by the TSHD PhD coordinator to track the progress and spot potential*

*problems before they arise. The new monitoring system Hora Finita which was implemented in March 2019 will be used to support this aim.*

### **Research integrity**

The committee was pleased with the efforts regarding data management and research integrity in general. The program's prudent maxim "extraordinary results require extraordinary evidence" was considered impressive. Despite these high standards some PhD students were unaware of the course on research ethics and those that had participated in it were skeptical about the mandatory character.

*Response program:*

*see the response of the board below.*

*Response Board:*

*The policy on research ethics (both at the TSHD and TiU levels) has recently been implemented including specific administrative procedures and forms that apply for ethical clearance. TSHD is aware of its responsibility to equip its staff with the relevant knowledge and mentality in this regard, especially the new generation, such as specific courses that are currently offered on ethical issues.*

### **Diversity**

Despite the intention to share the goals of the Dutch in general, to strive for a staff that reflects the (student) population the committee found it disappointing that the program selects staff based on quality instead of diversity requirements. Special attention (early) in the application process is required to achieve a diverse staff. However, the committee was reassured by the vacancy that has been created for a female full professor in simulation.

*Response program:*

*We actively seek greater diversity in our group, not only in terms of gender but also in terms of ethnicity. The composition of our group is testament to this.*

*Response Board:*

*The TSHD Board supports TiU's ambitions regarding diversity and has additionally created its own policy to foster this goal. Several actions have been and will be taken to improve a better balanced staff, such as the creation of professor positions for women and special attention throughout application procedures.*

### **Recommendations (summarized)**

- The program should eventually focus its strategy more narrowly for the coming years, and articulate it in a brief position paper (2-3 pp.). It might be a good exercise to consider what areas of AI, for example, will versus will not play a role in CS&AI in the near future.
- The program should guarantee that all members have access to all the computing power they need.
- The assistant and associate professors should continue to seek the more conventional NWO and ERC grants in order to achieve a balanced portfolio of external funding.
- PhD candidates should be systematically informed about opportunities for further training, both in generic skills and in very specialised courses. The research program needs to coordinate with the graduate school to ensure that information is systematically provided.
- PhD candidates should know about their training and supervision plans and regular meetings should review these.
- The completion timetable rates for PhD candidates must be improved, without compromising the quality of PhD projects and the final dissertations.
- Proactive measures to improve gender diversity should be adopted.

*Response program:*

*see our comments above.*

*Response Board:*

*The Board of TSHD is pleased with the general assessment and specific recommendations for the future.*

## **Assessment Language, Communication and Cognition**

### **Quantitative assessment**

Research quality:	1
Relevance to society:	2
Viability:	2

### **Research quality**

According to the committee, LCC has an impressive publication record in the reporting period, including publications in highly ranked journals and conference venues in the diverse fields covered by the LCC members. The program managed to increase external funding (including prestigious grants such as H2020 and ERC), bringing the success rate to an enviable level. The group has steadily grown in the reporting period. LCC developed and maintained a very strong international reputation through the leadership activities of a number of its staff, high-quality publications (including those of the PhD candidates). This reputation is acknowledged by editorial activity and professional associations of its members. Besides that, the program is among the ranks of several Dutch universities with exceptionally strong reputations in communication. The program differs from these other groups by applying an interdisciplinary approach. According to the committee, the program may benefit from adopting a stronger concentration in computational social science approaches and by capitalizing on data science approaches to hypothesis testing.

After the recent separation of the LCC and CC program LCC continues to bridge traditional and computational methods effectively. The programs continue to collaborate in several projects and apply together to grant proposals. Besides that, LCC has hired new staff members to strengthen their expertise in computational social science and forms additional partnerships with staff from the other TiU schools with data science expertise. The committee recognizes the program's efforts to respond to its previous review by expanding the kind of funding, sharpening its focus on applications that are relevant to society and adjusting the teaching efforts to support research.

*Response program:*

*Our LCC program has a long tradition of computational research and we think that we are able to bridge traditional and computational methods effectively. This is also shown in our publications in highly ranked computational journals, next to our publications in psychology and communication journals. We agree that it is important to incorporate computational social science approaches and data science approaches to hypothesis testing and have recently hired new faculty with specific expertise in this field, to further expand our research in that area.*

### **Societal relevance**

LCC's research tends to focus on theory development and application in order to understand and explain social phenomena. This approach is common in traditional humanities and social sciences. It is impressive that LCC, unlike much of the current research into 'trendy' topics, maintains a focus on the fundamental "building blocks" of communication next to the (societal)

applications of its research. LCC collaborates both with partners in industry and non-profit organizations to (co-)create value for society. With regard to the three impact themes TiU has assigned, LCC decided to strengthen its research in eHealth, which fits in the theme 'Enhancing Health and Well-being.' Two professors with the relevant expertise were attracted. This new expertise helped to secure new funding, which attested the research strength, and enables research in collaboration with hospitals and patient organizations to have a direct societal impact. The chair in 'eHealth and data science' also has the potential to contribute to this goal.

One LCC PhD graduate founded his own start-up created from research conducted at LCC, focusing on developing conversational AI. This start-up has one the best start-up prize and the initiator remains involved with the program for 1 day a week. Overall, LCC's considerable research activity shows leadership and potential impact to society. The committee's report mentions several examples: people's ability to visualize climate change, the beneficial and detrimental effects of human interaction via the internet, and the applications to improve health (care) and research concerning social robotics. Societal partners find their way to LCC members and invest in their research to develop solutions (in collaborations) for their challenges, attesting to the relevance of the research. The committee found LCC's involvement in a wide range of societal partners (hospitals, local government and NGO) impressive, despite its primary focus on scholarship.

LCC members present their findings, on occasion, in the popular media. They actively use social media professionally and write popular books for a broader audience. During the site visit the committee noticed that the program has not made outreach a top priority. To enhance this a significant change in strategy and possibly additional staff would be required. The program could also make use of TiU's PR unit to display their research.

#### *Response program:*

*We fear that we may have created the wrong impression for the committee in this respect. While it is true that our primary focus is on doing excellent research and that we do not write a press release for every LCC study that is published, LCC members do spend a lot of time and effort on outreach (and also do substantially more than is mentioned in the report of the committee). Many of our researchers are active on social media (including, for example, @christineliebr, @visual\_linguist, @evanmiltenburg, @mariek\_vda, @Nadine\_Bol, @renske2310, @AlwindeRooij, @jmsdewit, @thiagocasfer). Various LCC researchers have written popular science books intended for a broader audience, including *The Visual Language of Comics*, *Fan-tas-tisch om hier te zijn!* (*Fan-tas-tic to be here!*), *Ik verf tot ik sterf* (untranslatable, about poor marketing slogans), and *De Schrijfwijzer* (same, about text writing). LCC researchers appear frequently in the media: in 2018, alone, all major Dutch news papers, including NRC, de Volkskrant, *Algemeen Dagblad*, and Trouw, and many local papers, including Brabants Dagblad, de Tilburger, Leeuwarder Courant and many more, reported about LCC research. LCC researchers have also presented their research at, for example, the Drongo language festival, the NEMO science museum and the Lowlands music festival (these appearances, mentioned in the CC but not the LCC assessment report, are actually joint LCC-CC efforts related to L2TOR).*

#### **Viability**

In the reporting period, LCC has grown in terms of scientific staff. The appointment of new staff adds more (varied) expertise to the group. This enables LCC to conduct even more interdisciplinary research, a clear strength of the group according to the committee. It also shows the attractiveness of the program. Several of these appointments were enabled by secured

funding, in some cases very competitive research grants, both individual and collaborative. This indicates the respect for LCC in their field and the international visibility of the program.

The growth of a research program can pose challenges such as integrating and managing the new members of the group. In the case of LCC the expanding staff size coincides with an increase in research output. This indicates that the program has managed to attract high-quality researchers. The meetings during the site visit further confirmed that assistant professors feel very strongly supported, enabling them to energetically pursue their research and develop their career. Some new members noted that they could benefit if more support were to be made available, in terms of PhD candidates or postdocs, to allow them to prepare for prospective projects after grant awardings. This does not seem unreasonable, and it would be beneficial if the university could provide this kind of 'start-up' assistance.

*Response program:*

*We recognize that, with the increased competition for funding (e.g., NWO, ERC) and the decrease in so-called 'eerste geldstroom' funding, it is increasingly difficult for junior staff to supervise PhD candidates and build their CV in that regard. Whenever this is possible, we invite junior staff members to become daily supervisors on PhD-projects and we also support them (e.g., via a temporary reduction in their teaching load) to write proposals that may allow them to obtain funds for a PhD-position. We also think, however, that this is a problem that needs to be addressed at a higher level as well.*

*Response Board:*

*The Board of TSHD is fully aware that it is becoming increasingly more difficult to be successful in various grant application programs; one important ally that the board wants to pursue in the future is to create a climate in which efforts for grant applications are combined with other partners both within the school, with other schools and within the larger academic community (for instance within the framework on the impact programs of TiU).*

The program has managed to increase and diversify funding sources very well, despite the uncertainty of funding cycles. The development of grant acquisition planning procedures and strategies are innovative and the program has benefit from the support of grant acquisition officers. Funding has been secured from diverse sources: national, international and industry. As for the latter, the meetings with the staff made clear that they could use more support in identifying possible industry partners for grant applications. Later meetings showed that these facilities are being offered so the services could either be improved or the availability of the services should be promoted better to the staff.

*Response Board:*

*The TSHD Board is pleased to hear that researchers feel that they receive professional support in its efforts to attract external funding. The TiU Grant Support Team is doing a great job in helping out with finding more opportunities for pro-active support. The Board will discuss this with the newly appointed TSHD account manager in this Team.*

Although LCC has been successful in obtaining more external research funding the ration between internal and external (currently 70/30) could be improved towards the latter in order to become more viable as a program. Despite this remark the committee notes that the program is relatively young and they will move into promising directions if they continue this way and be able to maintain their position among leading programs internationally.

*Response program:*

*Over the past years, we have increased our efforts to obtain more external funding (e.g., by providing training and feedback sessions to faculty and by temporarily reducing the teaching load of those who write a grant proposal), which has resulted in a number of competitive grants (NWO,*

*ERC). We will continue our efforts in this regard, also to make sure that we remain competitive and successful in obtaining external funding in the future.*

The committee recognizes a variable but strong involvement in TiU's impact themes. The program's strategy to strengthen its research on eHealth to connect primarily to TiU's impact theme related to health and well-being is commendable. However, the committee suggest LCC to consider expanding its research to other areas to be able to better connect with the well-being aspect of the theme as well, as with the theme 'Resilient Society'. The committee gives some examples, regarding climate communication and mediated interpersonal communication. These components seem to be implicit in the work of LCC and could be made more explicit.

*Response program:*

*We appreciate this suggestion and will make sure to make this more explicit.*

*Response Board:*

*In line with what was stated above, the TSHD Board encourages researchers and program leaders to connect to the University impact themes, is pleased to see the efforts of this program and can only endorse the recommendations of the committee.*

It is unclear to the committee whether the LCC research occupies a particular niche at other (inter)national universities. Regardless of this, the research program is considered among the strong communication research programs internationally. More prominence could be obtained by promoting LCC's integrations of computational research methods in its research and instruction. Based on the self-assessment report, the focus for the future is on broadening the areas of research and teaching, and collaborating actively with other scholars. The committee lacked information on transformations concerning research methodologies and technologies. However, the site visit made clear that these matters are taken into account by adding junior faculty staff with additional methodological and computer science skills and by collaborating with others research units and universities. The committee adds that other similar research programs are applying the same strategy, which would not really enhance LCC's competitiveness. Overall, the committee invites the program to consider its own innovative ways to maintain its distinctiveness, international leadership and visibility.

*Response program:*

*We very much agree with this and are working hard to maintain our distinctiveness (e.g., by recruiting junior faculty with unique expertise, through our national and international collaborations, and by contributing in a novel way to the impact themes as defined by our university).*

## **PhD Program**

The quality of the PhD program is secured by several measures. All PhD candidates are jointly supervised by several members of the research program, which also enables them to conduct interdisciplinary research. There are multiple opportunities to present and discuss work with peers and other members such as monthly meetings, regular discussion groups and the annual PhD Day. Theses are based on journal papers to ensure quality venues for their work and acceptance by peers. The committee praises the practice to put PhD candidates as first author, which offers them the opportunity to build their academic reputation as a springboard for the future. Most of the PhD graduates remain in academics, finding positions at prestigious (inter)national universities. Only some go to industry. The committee found this remarkable. The admission procedure offers chances to both internal and external students. Internal (research) master students receive help if they wish to apply for research funding at NWO or ERC.

Despite these positive circumstances, the committee is concerned about the inordinate amount of time for PhD candidates to finish their trajectories. The program should find ways to improve these completion rates without compromising the quality of the trajectories and theses.

**Response program:**

*This is not correct, as we would like to explain. The general LCC PhD policy is that PhD students should aim to have their thesis manuscript approved by the promotores at the end of their contract. After approval of the manuscript it takes roughly half a year before the actual defense takes place (because first the external reading committee needs their time, and once approved, so does the actual printing and distribution of the final thesis). This means that the 12% that finish in four years, actually completed their thesis earlier than planned (in 3.5 years). It should also be mentioned that a sizeable number of our PhDs get an extended teaching contract, of, for example, one year. This allows them to spread out their research time over a longer period (5 years in the example), and simultaneously enables them to gain substantial teaching experience. This, we suspect, is one of the reasons why our PhDs do well in academia after their defense. In the statistics, however, they would incorrectly count as PhDs which take one year longer to finish, even though they would finish in the allotted time.*

*We are unsure where the precise number of 53% in seven years comes from, but it is incorrect. For the 24 LCC PhD alumni listed in the additional document provided to the committee, the average completion time was around 5 years, and the one that took longest took exactly 7 years to finish.*

**Response Board:**

*The calculation of the PhD success rates is based on the enrollment period in the Graduate School from the registration until the thesis defense. This does not take into account part-time appointments or teaching contracts at a later stage. Consequently, PhD candidates may extend their contract without factual ‘delay’ in their trajectories. Besides this, TSHD has taken several measures to prevent delay in the trajectories, such as the monitoring talks that have been set up by the TSHD PhD coordinator to track the progress and spot potential problems before they arise. The new monitoring system Hora Finita which, was implemented in March 2019 will be used to support this aim.*

**Research integrity**

In the reporting period, LCC has been actively involved in the development of TiU’s policy regarding research ethics and data management. Several members of the program were and still are invested in TSHD’s own Research Ethics and Data Management Committee. All of the research within the program complies with the values of this committee. Given the nature of the research, a lot of attention is paid to responsible data management. This includes the promotion of open research, both open data and open access of research output where this is possible.

**Response Board:**

*The THSD board very much appreciates the continuous efforts of the program in the development of both the School’s and the University’s Research Ethics and Data Management Policy. This involvement ensures that the developments move in the right direction (appropriate to the needs of the research areas) and fosters the acceptance of the policy.*

The site visit confirmed that LCC members are aware of the policy and regulations, both senior and junior such as de PhD community. As for the latter, the committee was impressed by the measure to include the replication of others’ experimental studies in its educations for PhD candidates as a first research effort. Besides the educational component regarding methodology, it implants a strong value on research integrity in the education of PhD candidates.

*Response Board:*

*The policy on research ethics (both at the TSHD and TiU levels) has recently been implemented including specific administrative procedures and forms that apply for ethical clearance. TSHD is aware of its responsibility to equip its staff with the relevant knowledge and mentality in this regard, especially the new generation, such as specific courses that are currently offered on ethical issues.*

**Diversity**

In the reporting period, LCC has mainly focused on staff diversity in terms of gender and age, in line with the top priority of TiU's policy. During the site visit no particular tensions or gaps came to the surface. The committee suggests to take ethnic background of new staff into account when hiring process new faculty with a background in health communication, to be able to do more justice to the topic of health inequality.

*Response program:*

*We appreciate this suggestion and will continue our efforts to increase the diversity of our faculty, also in terms of ethnic background.*

*The TSHD Board supports TiU's ambitions regarding diversity and has additionally created its own policy to foster this goal. Several actions have been and will be taken to improve a better balanced staff, such as the creation of professor positions for women and special attention throughout application procedures.*

**Recommendations (summarized)**

The committee invites the program to consider the following suggestions:

- LCC should engage in long-range strategic reflection about its primary scientific objectives in order to strengthen the national and international awareness of its interdisciplinary niche among similar institutes, and to prepare for future strategic profiling of the program as the disciplines of language, communication, and computational social science experience greater convergence in the coming decade.
- Continue successful efforts to increase external funding.
- Look for ways to assist new faculty members with research support (PhDs or postdocs) as "startup" costs to assist them in the continuation of their research while they prepare initial grants.
- University-level efforts at public relations/media relations can involve more "translational" writers to more aggressively promote the work of LCC to the public via popular media and social media.
- Information should be systematically propagated on the university resources available to help faculty identify industry partners as part of their development of national-level grant proposals.
- The completion timetable rates for PhD candidates must be improved, without compromising the quality of PhD projects and the final dissertations.

*Response program:*

*See our previous comments. We thank the assessment committee for their constructive comments about the Language, Communication and Cognition (LCC) research program. Naturally, we are very happy with the positive outcome. We feel the assessment is fair and to the point, and we will certainly take the recommendations to heart.*

*Response Board:*

*The Board of TSHD is pleased with the general assessment and specific recommendations for the future.*