

**Preparing Students Committee Meeting Summary**  
**October 6, 2015**  
**3310 Torgersen**

**In Attendance:** Stephanie Adams, Elsa Camargo, Kevin Carlson, Susan Clark, Ed Dorsa, Juan Espinoza, Katherine Keeney, Daniel Pierce-Parra, Patty Raun, Judy Ridinger, Jill Sible (Co-Chair), Angela Simmons, Jerald Walz, Danny White, and Matthew Wisnioski (Co-Chair)

**Guiding Principles**

We can't plan for the future unless we know who we are, what we value, and what we wish to preserve or to achieve. The purposes of this meeting were to: (1) get to know each other at a deeper level, (2) develop collaborative trust and shared approaches to the project, (3) learn what educational experiences from our own lives have proved most impactful, (4) establish the principles that guide how we seek to prepare students for whichever future we confront.

*Our own most meaningful experiences as students:*

- informal, atypical, and hands-on experiences were often the most meaningful
- a single mentor (usually faculty, but sometimes other students) made all the difference
- quite a few of us were first generation college students
- several faced financial challenges in affording college
- many of us started in a major quite different from our current field of study/expertise
- some were seen as "failures" until finding the right individual environment

*Values guiding our process:*

- keep people at the forefront of our work
- don't limit ourselves to where we are right now
- be inclusive of viewpoints
- build a clear structure of what we are trying to accomplish
- consider the "why not?"

*Some Guiding principles for preparing students:*

- flexibility:** remove the silos to learning and exploring for students, relax the rigidity, collaborative and interdisciplinary
- inclusivity:** provide access for all students
- holistic:** foster collaboration as a paradigm for learning, foster authentic service to humanity by our students, educate the whole student, T-shaped students, foster empathy
- student-centered:** keep the focus on the learning (vs. the teaching), empower students

Throughout the discussion committee members raised questions to consider during the visioning process.

*Questions to Consider*

- Why do we have majors? Why do we put students in silos? Maybe we should have them work across disciplines during their first two years in school.

- Why not tear up what we are doing? Why do we do what we do?
- Do we understand humanity? We need to ask ourselves this if we are going to help students think that way.
- What are the core things for what we want to prepare students? What do students look like after completing college?
- How do we take the things we don't like and how do we make them go away?
- How do we make sure that students have not only the knowledge, but the strength to work across disciplines?
- What we are doing well as an institution and how can we build on those to reimagine the future?

### *ELSA'S PERCEPTIONS:*

As committee members discussed the principles that will help guide the visioning process, they expressed the need to provide multiple points of access for ideas to generate during this process. All ideas should be considered. Additionally, all voices in the process should be heard and considered equal. Other members expressed that as the committee envisions 2047, they do not want to limit themselves to where they are right now. They do not want to see the institution's present situation as their starting point, but rather be open to all the possibilities. Finally, they want members of the university to be open to opportunities about different ways of learning.

As the committee envisions the future of Virginia Tech and the preparation of students, they want to make sure that there is an emphasis on learning and the value of it. The committee is interested in establishing among students the desire to want to learn for the sake of knowledge and not a grade. Ideas for accomplishing this included ending grades for student to focus more on learning the material and less about receiving a particular grade. Another way to create interest for knowledge would be to have students take general required courses during their first two years of college before taking courses in their major.

Committee members also discussed the need to emphasize the whole student and produce well rounded citizens. This means having students learn about more than their area of study. There is a need for students to build cultural competency through interactions outside of their fields and normal daily environments. Ideas for accomplishing this included abolishing majors and having students take courses in different disciplines, or having students take courses across disciplines during their first two years of college and then taking the last two years in their discipline. These two approaches would promote interdisciplinary learning and better prepare students for the world.

Other members expressed that students need to be provided with learning opportunities beyond the campus. Students should be able to link residential communities with the community at large. Another guiding principle is that Virginia Tech's foundation includes service. Members want the institution to remain authentic at the core.

Finally, as the meeting came to an end, there was discussion about the need to consider the role of technology in preparing students. Members expressed that technology is important but

that it will be important to remember that during this process it is people who are at the front versus technology and the institution.

### **Next Meeting**

The next Preparing Students Committee meeting will be on October 20<sup>th</sup>. The topic of discussion will be Envisioning 2047: looking 30 years out and 30 years back.

**Preparing Students Committee Meeting Summary**  
**October 20, 2015**  
**340 Goodwin Hall**



**In Attendance:** Elsa Camargo, Susan Clark, Kevin Carlson, Ed Dorsa, Jaimie Edwards, Noha Elsherbiny, Sarah Karpanty, Stephanie Lang, Emily Neer, Patty Raun, Jill Sible (Co-Chair), Angela Simmons, Danny White, and Matthew Wisnioski (Co-Chair).

*To get beyond our short-range perspectives, we will think broadly about the future and speculate on how to prepare students for it. When we meet in person, we will briefly summarize our session on guiding principles, talk collectively about how we view the future and why we view it that way, then focus in depth on ways to prepare students for those futures. What skills, habits of mind, infrastructures, or fundamental knowledge will students need in 2047? This exercise is designed to lay the groundwork for a deeper exploration of specific possibilities at Virginia Tech.*

### **Summary**

The meeting began with a summary of the guiding principles that were gathered from the previous meeting (see meeting notes from October 6, 2015 meeting). Next, highlights of the responses students gave to the in-person survey (see Student Survey Report for details) were reported to the group. The report of these responses framed the conversation as to what the world would look like in 2047.

As committee members began discussing their visions of the world in 2047 they expressed that they encountered several challenges in doing this. One, is that often when envisioning the future some found themselves thinking about technology. There is a large assumption that technology will continue to grow and that it makes people worry that they will not be able to get the best education because there will no longer be enough human interaction. This then raises the question “how can human interaction be blended with technology?” Technology will be whatever people make it.

Others struggled with thinking about the future beyond education. They thought about what students should be like when they leave college, who are the people that they want to send out to the world to do the things that are important. These questions are highly based on what the world will look like.

The co-chairs mentioned that in envisioning the world in 2047, they did not define who the college students would be. Who would be the “traditional student”? This is something that must also be considered when thinking about the future. Demographics are expected to change and will impact the way college students look and their needs in the future.

While thinking about the future, the committee discussed speculations vs. predictions vs. design and thought about these in relation to fads, trends, and deep forces. Committee members were urged to focus more on the deep forces that will face the future. In other words committee members had to decide on the deep forces that would shape the world. In order to accomplish this they began by discussing trends.

Committee members broke out into three groups and each one was assigned one of the following trends for discussion:

- *Access to education. While we are making strides globally to provide education to all, here in the US there is still education inequality and a struggle to access quality education. In addition, higher education is getting more and more expensive and still inaccessible to many amidst a widening wealth gap in the nation. How can we find ways to make higher education more affordable and accessible to all students? How can we make quality education more accessible? How can we improve the school systems that are preparing students for careers and/or higher education?*
- *Higher education will be increasingly globalized not only with international students coming to the US, but with US students seeking opportunities abroad.*
- *Students taking full charge for their own learning; fewer traditional majors and more interdisciplinary ones that engender critical thinking about interfacing with complex issues to discover solutions. Transformative power of learning in community – changes our behavior (faculty-student-administrations, others) in the world and identifies what is most vital for the future of individuals, communities, and societies. Creating authentic communities of inquiry and discovery. How students are evaluated will move from “grades” to a more competency-based assessment/evaluation. University infrastructure will be more nimble and adaptive to change at all levels of operation. This could include new higher education ownership models (university and private partnerships).*

Each group had to discuss if they believed this trend was true, what it meant for Virginia Tech, and how should they prepare students for it. When thinking about “students” they were asked to think about who are the students of 2047.

After discussing these trends they all came together and summarized the points made within the small groups. Below is a list of the points of discussion:

#### Access to Education

- Can we create a common vision of students?
- Can we dictate from on high?

- Students need to take control
- What is college education?
- Who is the student?
- What does it mean to be global?
- What does access mean for preparing students?
- Access <-> Mentoring

#### Cross Disciplinary Experiences

- Problems of future are too large for disciplines alone (don't abandon disciplines, but work across).
- Teaching transdisciplinary.
- Experiential learning
- These need to occur in the classroom and through co-curricular activities as well (e.g., VT Engage).
- The barrier that exists here is that faculty need to be rewarded for doing this work.
- How do we take students to the edges of these disciplines and make them superstars?
- How do you deal with the curriculum stuff, but don't make it curriculum only?

#### Global Land-Grant

- Physical location?
- Online?
- Build campuses elsewhere?

#### Globalized Higher Education

- International students will continue to come, but how many if the cost continues to go up?
- The current opportunities to study abroad are shielded.
- It is not only about going abroad but also about finding ways to learn from students come from abroad here. International students who come here have high expertise about other countries, we do not need to leave to find experts elsewhere to teach our students about the world.
- Are students of the future going to find their first job somewhere in the world?

#### **Next Meeting**

The next Preparing Students Committee meeting will be on November 10<sup>th</sup>. The meeting will focus on setting goals to help position Virginia Tech for 2047.

**Preparing Students Committee Meeting  
November 10, 2015  
Library 101M Multipurpose Room**

**In Attendance:** Elsa Camargo, Susan Clark, Kevin Carlson, Ed Dorsa, Juan Espinoza, Sarah Karpanty, Katherine Keeney, Stephanie Lang, Emily Neer, Patty Raun, Judy Ridinger, Jill Sible (Co-Chair), Jerald Walz, Danny White, and Matthew Wisnioski (Co-Chair).

The meeting began with a discussion that lasted about 45 minutes. During this discussion the committee decided to focus on scenarios within the context of three themes: experiential/participatory learning; *Ut Prosim*; and interdisciplinarity. The committee was then split into three smaller groups and each was assigned a theme. The task at hand for each group is to generate ideas under these themes that draw upon the committee's established guiding principles, VT's defining strengths, and deep forces that will shape the future. Additionally the groups must identify the challenges and boundaries to accomplish the idea and consider the fundamental notion of who will be a student in 2047.

During the second half of the meeting, the committee broke out into their assigned groups and discussed their respective theme. All the groups were assigned to bring an idea/s to the next Preparing Students Committee meeting on December 1<sup>st</sup>. Below are brief summaries of each group's discussion.

**Experiential/Participatory Learning Group**

Members: Elsa Camargo, Juan Espinoza, Sarah Karpanty (Group Chair), Stephanie Lang, Angela Simmons, and Danny White

The group decided to begin the discussion by reflecting on their own or observed quality experiential/participatory learning activities. As they think about these experiences they must consider:

- What made them high quality?
- How could these be integrated with the remainder of the student's learning experiences?
- How do we provide access to all students to some sort of these experiences?

The group will meet on Thursday, November 19<sup>th</sup> to discuss these points and how they feed into meeting the deep force challenges (in the context of the committee's established guiding principles and VT's strengths).

**Interdisciplinarity Group**

Members: Stephanie Adams, Rafael Davalos, Noha Elsherbiny, Ed Dorsa (Group Chair), Jerald Walz, and Matt Wisnioski

The group mostly discussed the idea of the "T-shaped university." How could educational experiences generate students with depth in specific areas, but gain in a structured/intentional way the skill sets to work in flexible, interdisciplinary environments toward the solution of pressing problems, the creation of new discoveries, etc.? The group did not discuss the specific form of their deliverable or whether to meet further in person to generate them.

**Ut Prosim Group**

Members: Kevin Carlson, Susan Clark, Emily Neer, Daniel Pierce-Parra, Patty Raun, and Jill Sible

The group's scenario will center on Ut Prosim with respect to preparing students. The scenario will draw upon the committee's established guiding principles, VT's defining strengths, and deep forces that will shape the future. The group will also consider challenges, boundaries to be eliminated, and the fundamental notion of who is (or will be) a student. The group will next meet on Friday, November 20<sup>th</sup> to continue this discussion.

**Next Meeting**

The next Preparing Students Committee meeting will be on December, 1<sup>st</sup> at 1180 Litton Reaves. The groups will each share their ideas with the rest of the committee.

**Preparing Students Committee Meeting**  
**December 1, 2015**  
**1180 Litton Reaves**

**In Attendance:** Stephanie Adams, Elsa Camargo, Susan Clark, Kevin Carlson, Rafael Davalos, Ed Dorsa, Sarah Karpanty, Katherine Keeney, Emily Neer, Patty Raun, Judy Ridinger, Jill Sible (Co-Chair), Angela Simmons, Danny White, and Matthew Wisnioski (Co-Chair).

The purpose of this meeting was to finalize each of the scenarios (Experiential/Participatory Learning, T-Shaped University, and Purpose-driven learning) share them with the rest of the committee. Therefore, during the first 20 minutes of the meeting each sub-group met to finalize their scenarios. Next, the committee came back together and each read their scenarios (see Appendix A) to the rest of the group. Each scenario was then discussed.

Committee members discussed how in 2047 students will live in an interconnected and diverse world. Members believe that educational models in the future will require for a growth in experiential learning beyond the classroom, allowing for more hands on experiences and exposure to diverse populations and settings. Students will experience T-shape learning and gain knowledge across disciplines and settings (e.g., communities) to better prepare them to solve complex world problems. They will need to contribute to areas outside their expertise. Courses and co-curricular activities will provide a seamless integration of learning experiences. Students will be able to make strong connections across their learning in and out of the classroom. Communities of faculty, staff, students, and community members will be created for students; the whole world will be a place for learning. In these communities students will use their interdisciplinary knowledge and further develop it along-side of faculty, staff, and community members. They will be forced to interact with people that are different than them. Students and faculty will be engaged in purposeful driven work that fuses learning, scholarship, and outreach. While technology will continue to develop in the next three decades, it will merely serve as a tool to educate students and not by replacing human interaction.

**Next Meeting**

This committee will meet in spring 2016 and continue to integrate the three scenarios into one. The dates and times are yet to be determined.

## Appendix A

### *Experiential/Participatory Learning*

Students will live in a world that will be highly diverse and interconnected, requiring them to know more about other people and have diverse experiences beyond the classroom. To better prepare students for the world in which they will live, in 2047 Virginia Tech will require all students to complete at least (but are not limited to) one multi-semester long experiential/participatory learning activities. Activities that fall under experiential/participatory learning will include service learning, leadership training, research, internships, study abroad, vision trip, community involvement, educational trip, student organizations, and project-based courses. The options that students will have to fulfill the experiential/participatory learning requirement are person-centered, reflexive, accessible, inclusive, flexible, and engage the whole person.

To ensure that the experiential/participatory activities are of high quality, there are several aspects that must occur. First, students will be prepared prior to initiating these experiences with course work and other knowledge (e.g., historical context if different location). Preparation prior to these learning activities will allow students to feel invested, be self-motivated, and take ownership during their experiences. Second, the experiences must yield lasting bonds with faculty, students, and those in which they engage. The experiences must be diverse in ideas or interactions. Third, the experiences must not end abruptly; this might mean that the experiential learning activity lasts multiple semesters. The experience will be integrated into the remainder of the student's learning experiences through a cross disciplinary capstone university course, poster symposiums, seminars for students to reflect on these experiences, etc. It is important for students to reflect on new acquired knowledge and how to make sense of it in relation to rest of their life (academically, professionally, and personally).

To make these opportunities accessible to all students, the university can offer experiences that vary in time (e.g., one week, a month, etc.) and also address the additional cost by including it into the tuition price, have scholarships and grants available to students, find ways to pull from the large network of alumni, and the use of technology.

### *The T-Shaped University (Interdisciplinary)*

- The world that VT graduates of 2047 enter will present ever more broad-ranging, complex and difficult problems to solve. It is unlikely that one discipline, working in isolation will be able to resolve these problems. Even today it is hard to consider any of the significant problems facing society without considering all of their ramifications: economic, social, political, health, environmental, etc.
- It is more likely that the solutions to these problems will come from teams of interdisciplinary researchers, each member with a different discipline-specific expertise, but each well trained in interdisciplinary team work.

- Working with disparate specialties is not a passive activity; members of cross-disciplinary teams need to be able to actively *contribute* to areas outside their expertise. Learning how to do this does not come naturally and needs to begin while students are still in the University.
- The T-Shaped Graduate of VT2047 is one who has a vertical expertise in their particular discipline as well as the interdisciplinary skills to horizontally reach out to other disciplines and contribute meaningfully to their work. This starts with the T-Shaped Student of 2015.
- Separating the work or contributions of one person from another in an interdisciplinary team is extremely difficult and is in effect self-defeating. Project oriented work needs to focus on the project and not on the grade; individual grades are essentially shorthand and tell very little about the contributions of a specific team member.
- As we move towards interdisciplinary teams the University needs to reconsider the role of faculty: their new role as interdisciplinary team managers; the place of individually evaluated research; the purpose of tenure.
- When working on difficult problems, teams will often try solutions that are “out there” and are eventually proven to not work. We need these teams to risk “failure.” If we want these teams to continue to push boundaries, they can’t be afraid of getting a bad grade. Grading Interdisciplinary work should be evaluated on a pass/fail basis, focused primarily on how well the team worked together.
- Students across the University should graduate with discipline-specific portfolios, which focus on demonstrated skills and competencies of their chosen field.
- Besides broadening a student’s education, a T-Shaped Student also has an individualized education – no two students will have the exact same portfolio.

### ***Purpose-driven Learning at Virginia Tech in 2047: Ut Prosim Imbued Education***

In 2047, students will come to Virginia Tech because they thirst for learning to become experts in biology, management, agriculture, psychology, or theatre, but also because they are called to serve humankind and our planet, and are not willing to wait for a degree or diploma before they can start contributing and making a difference.

These students might be 17 or 18, straight out of a high school education, if these still exist, but they might be much younger, with strong foundational knowledge (possibly even as a VT K-8 student) and ready to apply that learning. They might be 67, having completed a successful career in one field and are now eager to both lend their expertise and build their own capacity with new learning as a part of a scholarly and engaged community.

Students will still come to Blacksburg to experience life in residence at one of the most beautiful college campuses in the world, but they know that their learning will not be bounded by geography. Blacksburg (and for some, a satellite or virtual alternative) will be home base, a place

for meaningful face-to-face interactions with fellow human beings committed to learning and a shared cause. But students, faculty and staff, working together in close-knit teams, will travel the world to learn and to serve. The whole world will be the extended campus.

Virginia Tech will honor its rich history as a land grant university and military school. Most importantly, Virginia Tech will honor its motto, *Ut Prosim*, as the bedrock of the institution and the feature that distinguishes a Virginia Tech education from any other. Students and faculty who come to Virginia Tech know that they will be engaged in **purpose driven work**, in which the tripartite mission of learning, scholarship and outreach fuse through **collaborative experiential learning**.

In 2015 and undoubtedly 2047, the manifestations of *Ut Prosim* need to be different to serve a society, where much is constantly in flux. Service demands a strong capacity in **problem solving** as well as **engaging socially in communities**. No longer will a scientist working alone in his or her laboratory be able to make major contributions to solving world issues nor will Peace Corps volunteers be certain of having a positive impact without deep disciplinary skills and a broader understanding of the complex world in which they are working.

The primary learning goal will be to develop **T-shaped (and  $\pi$ -shaped)** students with the distinguishing feature that at Virginia Tech, there is intentional development of learners in how they **connect with each other in community**. Students will have the option to engage with deep learning in one discipline or a more interdisciplinary major or both. Students, faculty and staff will come to Virginia Tech and affiliate with others around an issue of mutual concern, and students will apply what they are learning in service of this issue. These affinities will form the basis of communities that engage in collaborative experiential learning in a model that is **emergent**, both **flexible and adaptive**. Self-reinforcing communities will consist of ~150 members, diverse in all conceivable ways, which operate functionally in working groups of 15 people (10 groups per community). There may be multiple communities centered around the same issue as well as cross-fertilizations across different communities. A community will be constructed with all of the necessary capacities: intellectual, financial, human, social, cultural. Communities will **disrupt the hierarchy** by engaging people **across all levels of education** - K12, undergraduate, graduate, faculty and people outside of Virginia Tech. Mentorship will be built in at all levels.

Some organizational elements that exist today will continue to serve in this new model of learning. Departments or some kind of disciplinary unit organized around deep knowledge will still serve as a place for people to come together to gain and share expertise, resources, and culture. Institutes may serve as entities that provide support and resources to communities working on particular issues.

However, other aspects of university organization and culture will need to change. The rigid college structure does not serve the dynamic, interdisciplinary, and inclusive nature of the community model. Moreover, expectations, rewards, and support for faculty would need to change with engaged scholarship rewarded. The current curricular, credit bearing structure is not a good fit for this work, and is a barrier to facile collaborations between Academic and Student Affairs. These collaborations would need to be seamless to support the work of these

communities. Relationships with the broader community outside of Virginia Tech, local and global, would need to be strengthened.

**Preparing Students Committee Meeting Summary**  
**January 19, 2016**  
**1028 Pamplin**

**In Attendance:** Elsa Camargo, Kevin Carlson, Susan Clark, Rafael Davalos, Ed Dorsa, Juan Espinosa, Sarah Karpanty, Stephanie Lang, Najla Mouchrek, Emily Neer, Kate Preston Keeney, Judy Ridinger, Provost Thanassis Rikakis, Patty Raun, Jill Sible (Co-Chair), Angela Simmons, Danny White, Jerald Walz, and Matthew Wisnioski (Co-Chair).

## **Summary**

After having presented the three scenarios from the working group to the Steering Committee last December, the co-chairs decided to invite Provost Thanassis Rikakis. The goal for such invitation was to obtain additional feedback on any areas that the scenarios did not address or needed additional depth (e.g., technological dimensions).

### *First Half*

During the first hour of the meeting, Dr. Rikakis began by explaining some of the directions in which Virginia Tech needs to go based on the needs of 21<sup>st</sup> century. Some ideas that he shared included the initiation of an incubator that would require a cross of disciplines, destination areas, and adaptive learning. He also spent some time discussing the need to make the university more diverse and inclusive as it continues forward. The following are other themes he discussed and encouraged the working group to consider.

- How can we ensure that we are using a recruitment and admissions structure that is set-up for creating the T-shaped student?
  - We improve our student recruitment for H-STEM by creating partnerships with local schools, where we normally do a poor job in recruiting?
  - Such partnerships can help feed the pipeline of students attending Virginia Tech. By creating partnerships in certain areas, the university can cultivate underrepresented students' interest in Virginia Tech.
  - Admissions must also take a more holistic approach when reviewing students' applications. Admissions need to be based on more than grades.
- We need to think about learning in relation to the land-grant mission.
  - The land grant can be more defined based on programs vs. the place.
  - This will provide opportunities for students to learn everywhere.
- What is a faculty member in the 21<sup>st</sup> century?
  - What does the the tenure- track faculty member look like in 2047?
  - Or, is it about academia having a different type of faculty (e.g., multiple tracks that reward faculty based on their strengths)?
- Need to have diverse contexts for learning (across disciplines, student demographics, etc.)—*A Point Cloud Diagram was drawn by the Dr. Rikakis to discuss the following points about the VT Student.*
  - Find a balance between homogeneous and heterogeneous contexts.

- There needs to be content that stays discipline specific and serves as points of gravity. Students have experiences (plot points) in relation to these points of gravity (disciplines). Each dot in the diagram represents an experience and no one experience is worth more than another. All of these experiences (dots) help produce a T-shaped student.
- Think about technology as a means to educate students.
  - To prepare students in the future, technology will play a crucial role in their education.
  - What is expensive is data not so much the technology. You cannot properly use technology if you don't have all the data needed for the machinery to work.

In short, Dr. Rikakis advised the working group to think about what the university could do to be best positioned for 2047. What does Virginia Tech need to change/add as the world around us changes?

### *Second Half*

During the second hour of the meeting, members of the working group identified areas from the scenarios that they wanted to further define or develop. One area for development is the role of faculty. Until now, the working group has not addressed what faculty need to be like to successfully prepare T-shaped students. Committee members also want to further discuss when would be the best time for students to take courses outside their discipline (e.g., at the beginning, throughout, or last two years). The current three scenarios stress two characteristics that make Virginia Tech unique from other institutions: students “get their hands dirty” and are committed to service. The group will continue to work on making the need for human interaction more explicit. They feel that this must carry onto the future of Virginia Tech in order to preserve such unique institutional qualities. Additionally, members of the working group will continue discussing the role that they see for technology in the future and work to define such term.

### **Next Meeting**

The next Preparing Students Committee meeting will be on February 4<sup>th</sup>. The meeting will focus on discussing future revisions to the proposal that will be put forward to the Steering Committee.