



**ENHANCED DISCOVERY
— T H R O U G H —
GUIDED EXPLORATION**

2016-2021

**QUALITY ENHANCEMENT PLAN
TENNESSEE TECH UNIVERSITY**

QEP TOPIC

- Undergraduate Creative Inquiry

WHAT IS CREATIVE INQUIRY?

- **The process of exploring issues, objects or works through the collection and analysis of evidence including combining or synthesizing existing ideas, products, or expertise in original ways to answer an open-ended question or achieve a desired goal.**

EDGE STUDENT LEARNING OUTCOMES

1. Students will effectively use digital information search tools.
2. Students will formulate a creative inquiry question or problem.
3. Students will explore a creative inquiry question or problem.
 - 3.1 Choose an appropriate discovery process to address the problem.
 - 3.2 Collect information relevant to the problem.
 - 3.3 Assess collected information in a discipline-appropriate manner.
4. Students will create an original scholarly or creative project.
 - 4.1 Applying critical thinking skills and/or
 - 4.2 Applying creative thinking skills
5. Students will communicate their findings/creations/art/inventions in a discipline-appropriate manner.

FIG. 4.1. AN INQUIRY CYCLE (FROM LEVY ET AL., 2010).

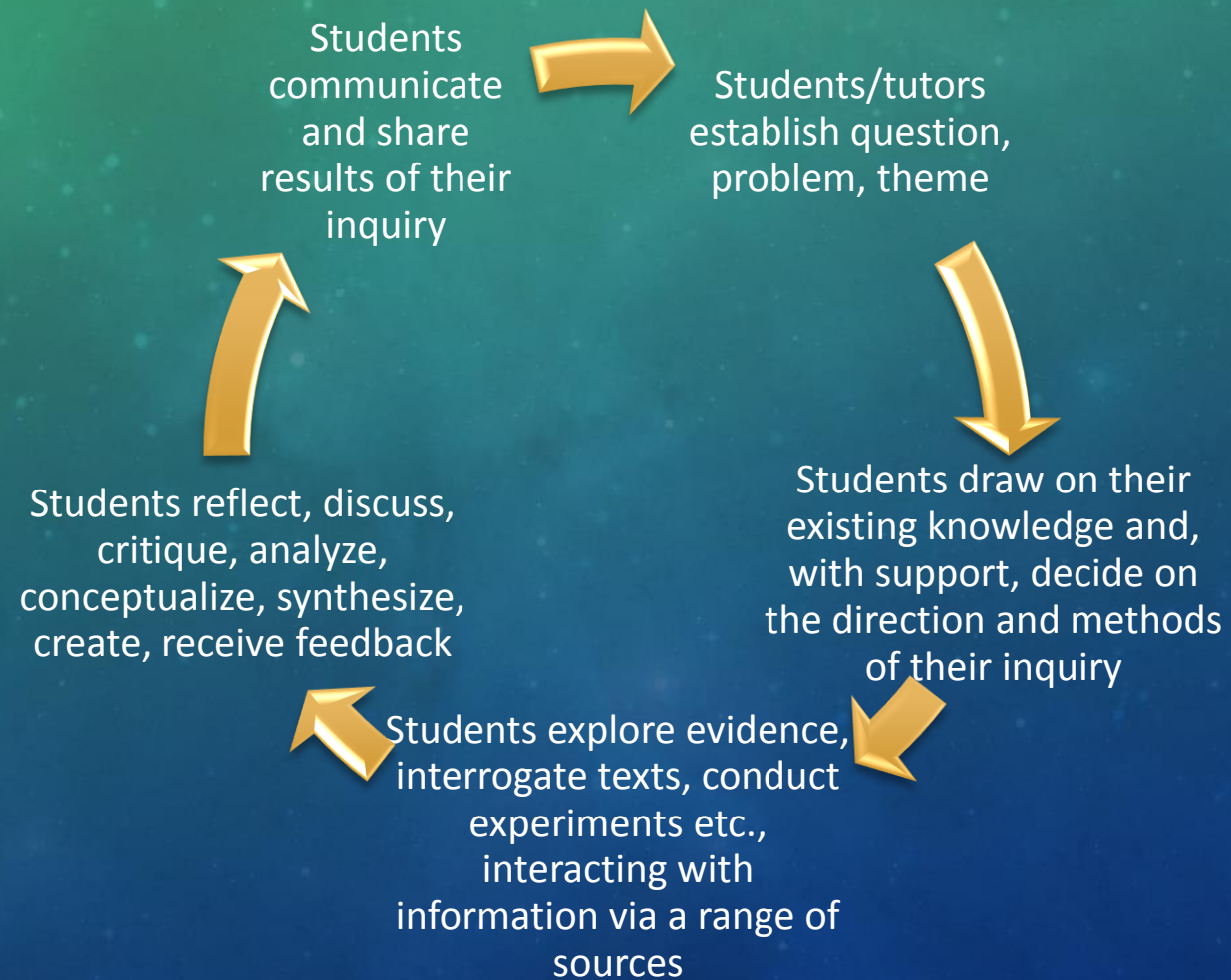
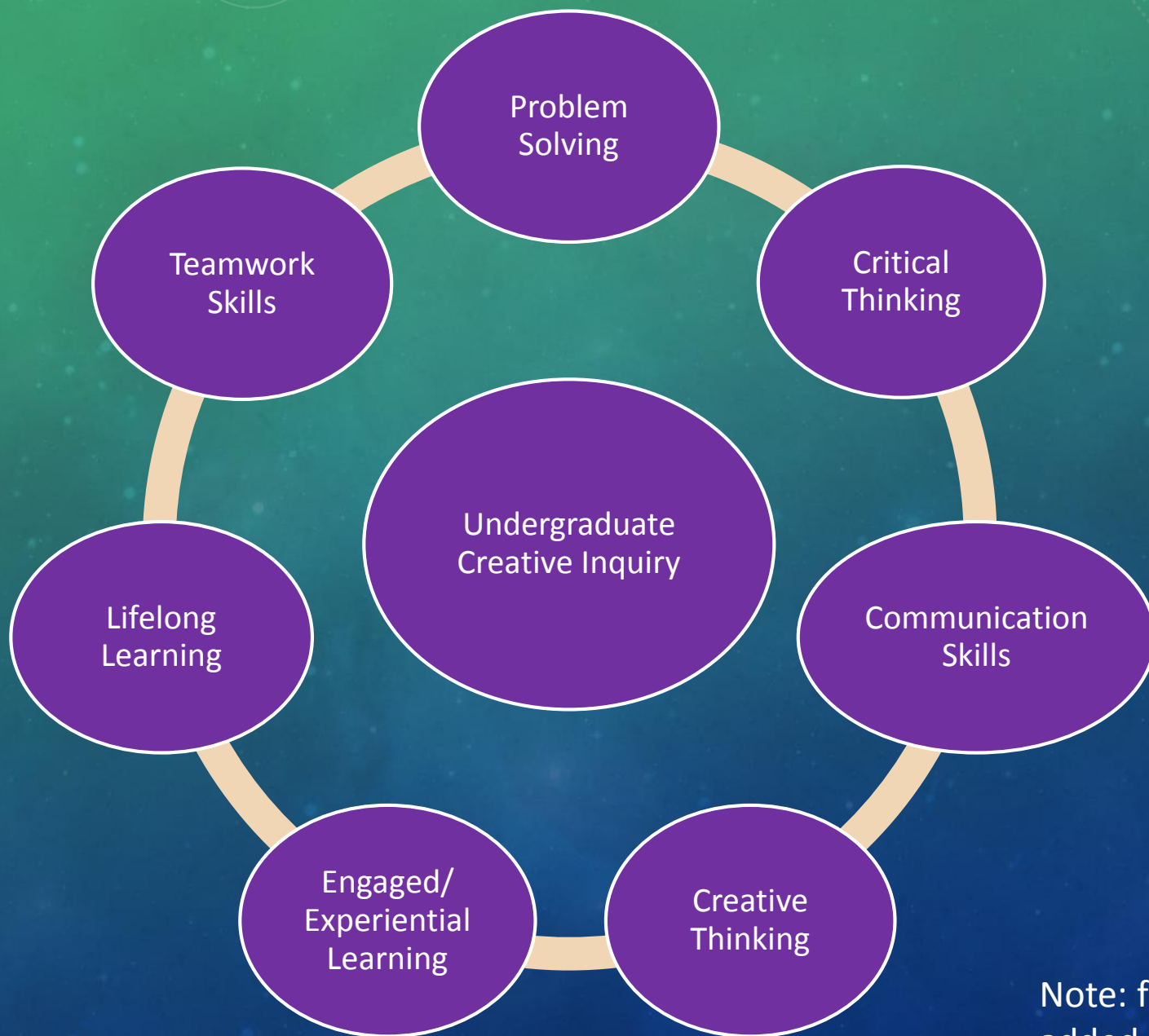


TABLE 2.2. RESULTS OF FACULTY, STAFF, STUDENT, ALUMNI, AND EMPLOYERS QEP TOPIC SURVEY.

Rank	Topic
1	Problem solving: foster student ability to design, evaluate and implement a strategy to answer an open-ended question or achieve a desired goal
2	Critical thinking: foster student ability to assess claims, theories or hypotheses by accessing and evaluating relevant evidence, identifying biases and assumptions, and considering multiple perspectives
3	Communication skills: improve student written and oral communication skills
4	Creative thinking: foster student ability to bring together existing ideas into new configurations, develop new possibilities for something that already exists, or discover or imagine something new
5	Engaged/experiential learning: integrating formal instruction and co-curricular activities such as undergraduate research, service-learning, study abroad, and internships; as well as one-time on-campus or off-campus events
6	Lifelong learning skills: prepare students for lifelong learning following graduation
7	Teamwork skills: foster the ability of students to collaborate effectively with others
8	Global awareness: enhance student knowledge of world events
9	Civic awareness: enhance student knowledge of national/local events
10	Intercultural competence: promote student appreciation for diversity



Note: figure mentioned by Dr. Lisc;
added on Jan. 27, 2016

**TABLE 3.8. RESPONSES OF SENIORS TO THE NSSE 2014
QUESTION: “HOW MUCH HAS YOUR EXPERIENCE AT THIS
INSTITUTION CONTRIBUTED TO YOUR KNOWLEDGE, SKILLS,
AND PERSONAL DEVELOPMENT IN THE FOLLOWING AREAS?”**

NSSE Question	TTU	Carnegie	Difference
17a. Writing clearly and effectively.	2.83	3.09	-0.26
17b. Speaking clearly and effectively.	2.92	2.96	-0.04
17c. Thinking critically and analytically.	3.27	3.30	-0.03

TABLE 3.9. HISTORICAL NSSE DATA FOR TENNESSEE TECH FRESHMEN AND SENIORS

	Freshmen			Seniors		
NSSE survey item	2005	2014	Change	2005	2014	Change
17a. How much has your experience at Tech contributed to your writing clearly and effectively	3.05	2.73	-0.32	2.91	2.83	-0.08
17b. How much has your experience at Tech contributed to your speaking clearly and effectively	2.74	2.57	-0.17	3.02	2.92	-0.10
17c. How much has your experience at Tech contributed to your thinking critically and analytically	3.10	2.97	-0.13	3.26	3.27	+0.01

FIG. 3.2. RELATIVE FREQUENCY THAT IDEA OBJECTIVES ARE SELECTED BY INSTRUCTOR (* DENOTES AN OBJECTIVE PARTICULARLY RELEVANT TO THE ORIGINAL QEP).



TABLE 3.11. HART RESEARCH ASSOCIATES (2010) EMPLOYER SURVEY RESULTS.

Learning Outcome	%
The ability to effectively communicate orally and in writing	89
Critical thinking and analytical reasoning skills	81
The ability to apply knowledge and skills to real-world settings through internships or other hands-on experiences	79
The ability to analyze and solve complex problems	75
The ability to connect choices and actions to ethical decisions	75
Teamwork skills and the ability to collaborate with others in diverse group settings	71
The ability to innovate and be creative	70
Concepts and new developments in science and technology	70

EDGE PROGRAM OUTCOMES

- 1. Undergraduate programs offer opportunities for creative inquiry.**
- 2. Faculty support undergraduate students in creative inquiry activities.**
- 3. Students participate in creative inquiry activities.**
- 4. Students have opportunities to communicate/disseminate the results of their creative inquiry activities.**
- 5. Students who have participated in creative inquiry activities are prepared for their career goals and advanced study.**

THE FOUR GOALS OF OUR QEP ARE TO

1. establish an undergraduate curriculum that encourages student success in creative inquiry
2. expand student co-curricular opportunities for undergraduate creative inquiry
3. support and acknowledge faculty and students who engage in creative inquiry
4. develop the infrastructure to support undergraduate creative inquiry

6.1 ESTABLISH AN UNDERGRADUATE CURRICULUM THAT ENCOURAGES STUDENT SUCCESS IN CREATIVE INQUIRY

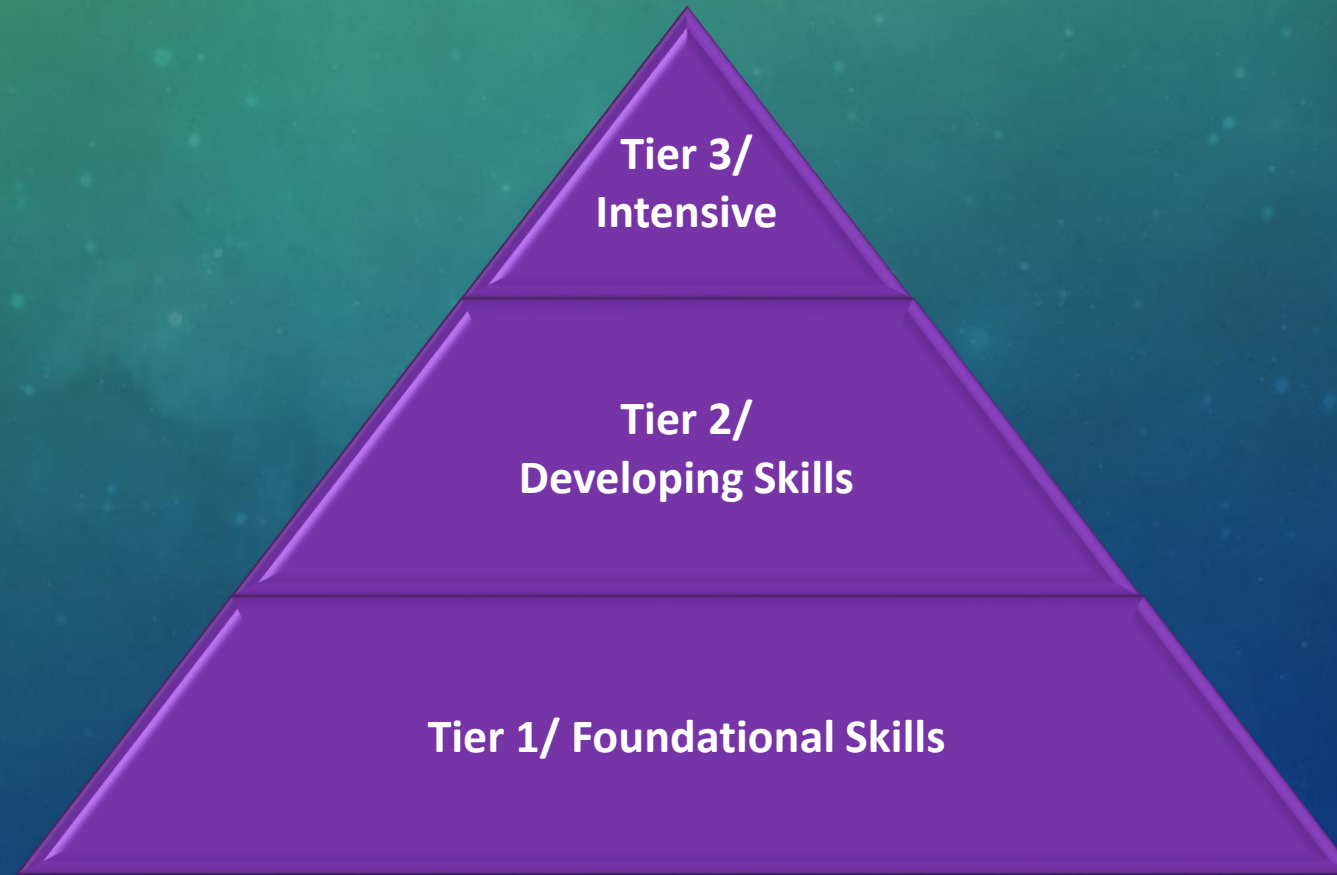


TABLE 6.2. PROJECTED NUMBER OF STUDENTS AFFECTED BY GOAL 1 INITIATIVES

Initiative	Pilot year 2015- 2016	Year 1: 2016- 2017	Year 2: 2017- 2018	Year 3: 2018- 2019	Year 4: 2019- 2020	Year 5: 2020- 2021
Tier 1 CI foundational skills initiative						
# students impacted*	40	280	2,100	2,200	2,300	2,400
Tier 2 and 3 curriculum grant program						
# new projects**	24	26	28	30	32	34
Total number of active projects by year	24	50	78	108	140	174
# of students impacted by active projects in current year (assumes 40 students per project per year)	1,013	2,000	3,120	4,320	5,600	6,960
Yearly subtotals						
# students impacted yearly	1,056	2,280	5,220	6,520	7,900	9,360

6.2 EXPAND STUDENT CO-CURRICULAR OPPORTUNITIES FOR UNDERGRADUATE CREATIVE INQUIRY

- **Creative Inquiry Summer Experience (CISE) Grants**
- **The Tennessee Tech Journal of Creative Inquiry**
- Expanding Tennessee Tech Research Day to Tennessee Tech Research and Creative Inquiry Day

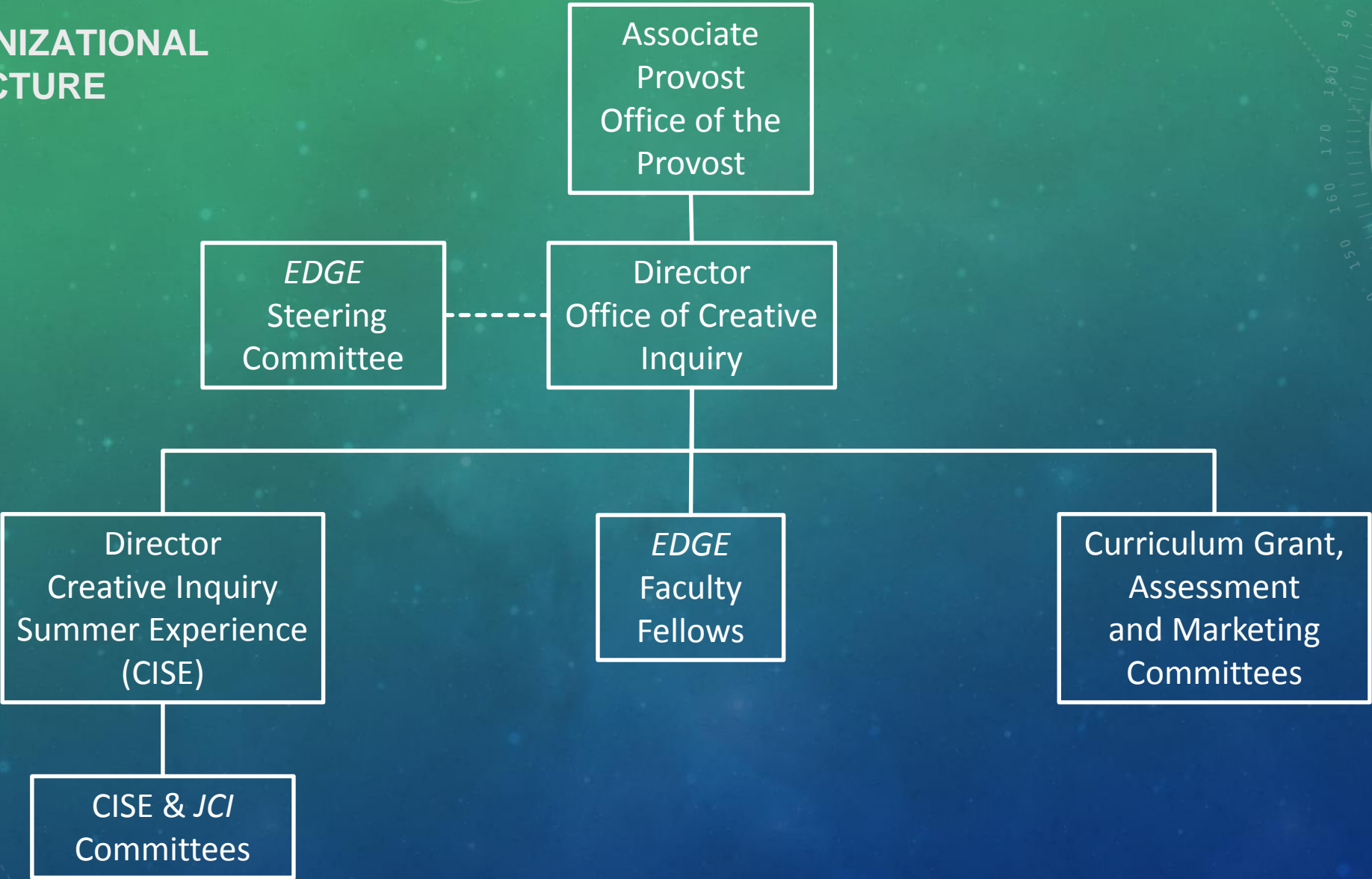
6.3 SUPPORT AND ACKNOWLEDGE FACULTY AND STUDENTS WHO ENGAGE IN CREATIVE INQUIRY

- Establish Excellence in Creative Inquiry Student Awards
- Establish the Tennessee Tech Creative Inquiry Faculty Fellows Program
- Offer Enhanced Institutional Membership to the Council of Undergraduate Research
- Provide Additional Opportunities and Support for Faculty Professional Development
- Establish Excellence in Creative Inquiry Faculty Awards

6.4 DEVELOP THE INFRASTRUCTURE TO SUPPORT UNDERGRADUATE CREATIVE INQUIRY

- Establish the Office of Creative Inquiry
- Establish a Central Website for Creative Inquiry
- Establish *EDGE* Committees
- Collaborate with Undergraduate Creative Inquiry Partner Programs

ORGANIZATIONAL
STRUCTURE



COMMITTEES

- ***EDGE* Steering Committee**
- **Curriculum Grant Committee**
- **CISE Committee**
- **Journal of Creative Inquiry Committee**
- **Assessment Committee**
- **Marketing Committee**

EDGE STEERING COMMITTEE

- The **EDGE Steering Committee** will provide directives for the implementation of *EDGE*.
- Responsibilities:
 - to establish guidelines for providing professional development to support the creative inquiry enriched curriculum, and approve the allocation of funds for this goal
 - to establish the criteria and guidelines for the Faculty Fellows Program, and to review applications.
- Membership of the Steering Committee is composed of faculty, staff, students, and administration. The OCI Director is the *EDGE* Steering Committee Chair. The Steering Committee meets monthly to review the progress of *EDGE*.

CURRICULUM GRANT COMMITTEE

The **Curriculum Grant Committee** will establish the criteria and guidelines for the Curriculum Grant Program and review submitted proposals for funding. This committee will also be responsible for

- establishing the criteria and guidelines for the Curriculum Sustainability Grant Program, and reviewing submitted proposals for funding
- administering the Award for Excellence in Creative Inquiry Instruction, including establishing the criteria for selection

Membership of the Curriculum Grant Committee is composed of faculty, staff, students, and administration. The OCI Director is the Curriculum Grant Committee Chair. The Honors Program Director is also a member of this committee.

CISE COMMITTEE

The **CISE Committee** will establish and refine the criteria and guidelines for CISE grants and review submitted proposals for funding. The CISE Committee will also be responsible for

- administering the Excellence in Creative Inquiry Student Awards, including establishing the criteria for selection
- administering the Award for Excellence in Creative Inquiry Mentoring, including establishing the criteria for selection
- coordinating with the Office of Research in order to grow greater participation in Tennessee Tech's Research and Creative Inquiry Day

Membership of the CISE Committee is composed of faculty, staff, students, and administration, including the OCI Director. The CISE Committee is chaired by the CISE Director.

JOURNAL OF CREATIVE INQUIRY COMMITTEE

- The **Journal of Creative Inquiry Committee** will establish the criteria and guidelines for the *JCI*, including layout and editing decisions, and will review manuscripts for publication.
- Membership of the JCI Committee is composed of faculty, staff, students, and administration. The CISE Director is the Chair of the JCI Committee.

ASSESSMENT COMMITTEE

- The **Assessment Committee** will refine the assessment plan for *EDGE*. Curricular and co-curricular programs will be assessed using direct and indirect measures.
- The committee will also analyze assessment data, produce reports, and offer recommendations for modifications to the plan.
- The Assessment Committee will be chaired by the Tennessee Tech Assessment Director. Members will include the OCI Director, the graduate assistant in the Office of Assessment, students and faculty.

MARKETING COMMITTEE

- The **Marketing Committee** will collaborate with the Office of Creative Inquiry to promote and publicize opportunities for participation of faculty, staff, and students in all aspects of *EDGE*.
- This committee will include the OCI Director, and other faculty, staff, and students as needed.