



**QEP**

**PEACE  
WITH  
CREATION**

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**ENVIRONMENTAL SUSTAINABILITY  
FROM AN ANABAPTIST PERSPECTIVE**

**2010**

**A QUALITY ENHANCEMENT PLAN SUBMITTED TO THE ON-SITE REVIEW COMMITTEE  
AND THE COMMISSION ON COLLEGES OF THE SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS  
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR REAFFIRMATION OF ACCREDITATION**

Peace with Creation:

Environmental Sustainability from an Anabaptist Perspective

Eastern Mennonite University

A Quality Enhancement Plan submitted to the On-Site Review Committee and the

Commission on Colleges of the

SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS

In

Partial Fulfillment of the Requirements

for Reaffirmation of Accreditation

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## Executive Summary

Eastern Mennonite University has developed the Quality Enhancement Plan around the topic of environmental sustainability. This project, entitled *Peace with Creation: Environmental Sustainability from an Anabaptist Perspective*, is firmly grounded in EMU's mission and values, has broad support from university leaders and stakeholders, and has a strong focus on student learning.

Through the QEP, EMU hopes to 1) strengthen our care for God's creation by enhancing our knowledge, values, and actions; and 2) increase sustainable practices at the University. Five student learning outcomes are aligned with the first overarching goal and will be implemented throughout the undergraduate curriculum. Specifically, curricular integration will occur in selected courses of the general education program as well as in required courses in each academic major. The second overarching goal of the project will be implemented through the institutional effectiveness process as each university department will develop an outcome related to sustainable practices. We envision outcomes such as increased participation in campus sustainability projects and events, improved management of waste or resources, and enhanced community partnerships around sustainability issues.

The QEP Implementation Team will provide an oversight and administrative role for the project. Specifically, the Team will offer scholarly resources for curricular integration and yearly workshops for professional development in the areas of sustainability in higher education and assessment of the QEP student learning outcomes. As well, the Team will collect, analyze, and evaluate assessment data, devising and implementing improvements when necessary. We welcome the reaffirmation committee's advice and comments regarding the key questions and issues listed in the final appendix of this proposal (Appendix K).

**Introduction**

Eastern Mennonite University (EMU) is one of five educational institutions of Mennonite Church USA. The institution is a leader among faith-based universities emphasizing peacebuilding, creation care, experiential learning, service and cross-cultural engagement. EMU has always considered itself first and foremost an institution for teaching and learning, and the University mission statement focuses on the unique identity of the institution and its task of education. In particular, part of the statement (reproduced below) summarizes the fundamental values of the institution, which express the understandings of the Anabaptist tradition that the institution represents. These values are expressed by a community that worships together, discerns truth together, and acknowledges itself as just one part of God's creation.

**Shared Values**

EMU embodies the enduring values of the Anabaptist tradition:

Christian discipleship,  
community,  
service, and  
peacebuilding.

Together we worship God, seek truth, and care for God's creation.

This mission-driven commitment to creation care is the foundation of EMU's Quality Enhancement Plan, *Peace with Creation: Environmental Sustainability from an Anabaptist Perspective*. The plan focuses on undergraduate student learning and builds on an interdisciplinary, four-dimensional framework of learning principles for sustainability, as described by Cortese (2005):

- The health of all current and future humans and other species
- The fairness, equity, stability and security of human cultures and social systems

- Economic opportunity for all current and future humans
- Ecological diversity and integrity

**Process Used to Develop the QEP**

The process for developing the QEP began with the winter retreat of the Strategic Planning Council (SPC; January 24, 2007), where the group identified key issues emerging from institutional effectiveness reports and other institutional research efforts. During their summer retreat on August 20, 2007, the SPC generated a list of eleven possible QEP topics. After further discussion within SPC, five topics were identified at the October 24 meeting as candidates for serious consideration and further processing: faith development, environmental sustainability, a teaching and learning center, residential learning communities, and the Global Village Curriculum. Brief written descriptions of these five topics and possible project ideas were presented to various constituent groups for discussion through January, 2008. Specifically, the following groups discussed the five possible QEP projects and provided feedback to SPC: the Board of Trustees (November 10, 2007); faculty and staff (University Forum, November 26, 2007); students (coffeehouse event on January 15, 2008; Seminary Community Council meeting on January 7, 2008); and Parent's Council (January 26, 2008).

Based on the feedback from constituent groups, SPC identified the three leading candidates for the QEP topic at their meeting on January 30, 2008: environmental sustainability, a teaching and learning center, and residential learning communities. Representatives for each of the three topics prepared audiovisual presentations, explaining the topic in depth, proposing how a QEP might be developed around the topic, and predicting the impact of such a project on student learning and development. These vignettes were presented on several occasions in various venues and were attended by over 300 faculty, staff, and students (e.g., Faculty Assembly on February

18; coffeehouse event on February 22). In addition, the PowerPoint versions of the presentations were posted on the EMU website along with a blog that afforded everyone on campus the opportunity to record their comments about the possible QEP topics. Further feedback was also invited from the Board of Trustees as well as from alumni via the Spring 2008 edition of *Crossroads*, EMU's alumni magazine.

In late March and early April 2008, faculty and staff were asked to vote to select the QEP topic. Voting took place in two phases – first, among the three topics and, subsequently, between the two topics receiving the most votes. On the first voting occasion, 132 faculty and staff members voted, with 62 in favor of environmental sustainability, 48 for a teaching and learning center, and 22 for learning communities. On the second occasion, 155 faculty and staff members voted, with 90 in favor of environmental sustainability and 65 for a teaching and learning center. At their April 23, 2008 meeting, SPC affirmed the choice of environmental sustainability as the QEP topic and the Board of Trustees approved this decision at their June 28 meeting.

The QEP Planning Committee (see Appendix A) was appointed by the president in August, 2008 to develop the environmental sustainability topic into a viable and sustainable project to enhance student learning. With broad representation from across campus – graduate and undergraduate faculty members and students, a student life director, and three other campus administrators – the Committee began meeting on September 17, 2008. One of their goals was to build upon the excitement and enthusiasm generated by the topic selection process. As well, mindful of the national economic downturn, we tried to be especially considerate of the sustainability of the project itself. The Committee met bi-weekly throughout the 2008-09 academic year, consulting with key campus constituencies such as the Associate Dean for Curriculum, SPC, Physical Plant staff, as well as faculty and students. Near the end of the spring semester, the chair of the Planning Committee presented a summary of our work and an



outline of our ideas for QEP implementation to a campus-wide meeting of faculty and staff (University Forum, March 23, 2009). Following this meeting, the Committee requested affirmation of our work from faculty and staff in the form of an on-line vote, and 97% of those voting supported the project as presented. The Committee continued to incorporate suggestions and refine the outline of the plan. The final outline of the QEP was presented at Faculty Staff Conference on April 30, 2009, and the Committee's work was completed when the outline was presented to the Board of Trustees at their June 18, 2009 meeting.

Finalizing the QEP proposal and preparing for project implementation began in the fall semester of 2009 when the president invited membership to the QEP Implementation Team (QEPIT). In the invitation dated September 21, 2009, Dr. Swartzendruber summarized the work of the Planning Committee, described the proposed role of each invitee, and charged the team with carrying forward the work of the Planning Committee, writing the proposal, preparing for the visit of the reaffirmation committee, and implementing the project once it is formally approved. Three members from the Planning Committee also serve on the QEPIT and are joined by the campus sustainability coordinator, an additional undergraduate faculty member, two undergraduate student representatives, a web development specialist, and an administrative assistant. Roles and responsibilities of the QEPIT are described in more detail in the *Organizational Structure* section of this proposal. A summary of the project development timeline is provided as Appendix B.

### **Identification of the Topic**

The choice of environmental sustainability as the topic for our QEP both reflects and reinforces EMU's mission. Educating students to serve and lead in a global context, the core of EMU's mission, requires that we incorporate into our teaching the interlocking

principles of economic, ecological, and social sustainability that define environmental sustainability. Further, the Anabaptist tradition calls us to be stewards of the earth through simple living and reconciliation. As President Loren Swartzendruber said in a chapel presentation delivered at EMU on April 13, 2007, "...this is a scientific and theological/moral issue. We are called to be good stewards of God's creation, and we are invited to make every effort to reduce the impact of our lifestyle choices...for the sake of the entire world and our future children and grandchildren."

In living out the shared values of the Anabaptist tradition, EMU has long demonstrated a commitment to environmental sustainability – through educational and extracurricular opportunities provided to our students as well as strategic management and use of resources and waste. For example, Earthkeepers, the student club that encourages environmentally friendly practices at EMU and in the surrounding community, was founded in the 1970s and is still active. Other indicators of EMU's commitment to sustainability include pioneering efforts in the area of energy conservation such as the innovative heating and cooling system installed in the then-new Campus Center in 1986 and an international agriculture program in the 1970s and '80s. Selection of environmental sustainability as the topic for the QEP capitalized on this historical foundation as well as a growing interest and enthusiasm over the last three years as evidenced by 1) an increase in campus sustainability efforts, 2) the establishment of the Creation Care Council in 2007, 3) a review and revision of the university mission statement in 2008, and 4) the inclusion of sustainable facilities development as a goal in the University's Strategic Plan.

*Campus sustainability efforts.* The EMU website highlights and describes in detail many of our current sustainability efforts ([www.emu.edu/begreen/](http://www.emu.edu/begreen/)). Following are selected examples of such efforts:

- New or revised sustainability-focused courses and majors – Green Design and Composting courses; Environmental Sustainability and Peacebuilding & Development majors.
- Campus garden – provides fresh, organic and local food for the cafeteria and gives students hands-on experience with sustainable agriculture.
- Dining Hall – adopted a student-led trayless policy, which has significantly decreased the amount of food waste and water use; instituted a program to compost 100% of food waste on site.
- Meadow on the EMU hill - besides the benefit of the natural beauty, the meadow provides superior water filtration, slows water runoff, saves money and emissions because of decreased mowing, and provides an outdoor classroom.
- Recycling – EMU has received national recognition for two consecutive years in the Recyclemania competition among US universities.
- LEED-certified buildings – the new Cedarwood residence hall is LEED certified and future residence hall and Science Center renovations will also comply with LEED certification requirements.
- Energy use – EMU ranks among the most energy-efficient universities in the US in terms of energy usage per square footage of building space.

*Establishment of the Creation Care Council.* EMU's Creation Care Council (CCC; see Appendix C) grew out of a faculty, staff and student initiative to provide a forum for coordinating campus-wide interest in sustainable living. The first meeting of the group on September 10, 2007 was attended by more than 70 students, faculty and staff including dining hall and physical plant management, science and conflict transformation faculty (both graduate and undergraduate level), student government leaders, seminary students, information technology staff, and the undergraduate academic dean. In

November 2009, the CCC formalized Sustainability Principles for EMU in the following areas: education, curriculum and theology; community relationships; resource management; transportation; and the built environment (see Appendix C). The CCC will be a significant resource for the implementation team, with a minimum of one QEPIT member also a member of the CCC. Although the focus of the QEP is on the integration of environmental sustainability into the curriculum, close cooperation with the CCC will ensure that these curriculum changes coordinate with and complement the wider campus environmental sustainability effort.

*Review and revision of the mission statement.* During the 2007-08 academic year, the Strategic Planning Council initiated and led a review of the university mission statement by soliciting affirmations and suggested revisions from faculty and staff, students, alumni, and the Board of Trustees. Following a major review and revision in 2002, this more recent review was begun with an eye to making the statement more comprehensive and was expected to produce only minor revisions. Based on feedback from the stakeholders mentioned above, the mission statement was revised on April 28, 2008 in order to more clearly articulate EMU's focus on creation care. In fact, strengthening this component of the values statement was suggested more often than any other change. As stated by one survey respondent, "It seems that in the coming years, one of our distinctives [*sic*] will be expanding concepts of justice and mercy to include our physical world."

Elevating this topic to a formalized, campus-wide initiative like the QEP will raise the visibility of EMU's "green" efforts and further enhance student learning with respect to environmental sustainability. To that end, the QEP has two overarching goals:

- 1. To strengthen our care for God's creation by enhancing our knowledge, values, and actions.**
- 2. To increase sustainable practices at EMU.**

**Desired Student Learning Outcomes**

The QEP will provide EMU students the opportunity to engage in learning experiences throughout the curriculum as well as to experience a campus environment with a heightened commitment to environmental sustainability. As a result, the EMU graduate will be able to:

***1. Define and justify environmental sustainability from a theological perspective.***

Environmental sustainability is commonly defined as meeting the “needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987).

Sustainability education, then, commonly emphasizes learning and working to secure a future that is economically, ecologically, and socially sustainable.

Grounding the QEP in Anabaptist theology will shape our definition of and educational approach to sustainability to include the concepts of creation care, peace, and social justice. These four themes (economic, ecological, social, and theological knowledge and practice) parallel the “Learning Principles for Sustainability” framework presented by Cortese (2005), which is organized around the four dimensions quoted here: the health of all current and future humans and other species; the fairness, equity, stability and security of human cultures and social systems; economic opportunity for all current and future humans; ecological diversity and integrity.

***2. Explain how individual, institutional, and community actions impact the environment.***

Through curricular and extracurricular activities, students will be encouraged to consider the environmental impact of actions at all levels of society – the individual, the institution, and the larger community.

**3. Name and defend actions that promote environmental sustainability at the individual, institutional, and community levels.**

Similarly, students will be encouraged to identify or develop actions to promote environmental sustainability. In addition, students will be expected to make arguments that support and explain the need for and viability of such actions.

**4. Integrate the principles of environmental sustainability within the student's discipline.**

The sustainability principles articulated under learning outcome 1 (health of all current and future humans and other species; the fairness, equity, stability and security of human cultures and social systems; economic opportunity for all current and future humans; and ecological diversity and integrity) are broad and interdisciplinary in nature. Thus, each major program offers exciting opportunities to explore how these principles may be applied in the field. As a result of the QEP, students will be able to identify and explain how sustainability principles can be integrated into the practice of their chosen discipline.

**5. Incorporate environmental sustainability into one's values system.**

This outcome is essentially a restatement of a central part of the University's mission – to produce graduates who embody “the enduring values of the Anabaptist tradition,” which include creation care.

### **Literature Review**

Exposure to the Anabaptist-Mennonite tradition and theology and immersion in a cross-cultural experience are distinctive aspects of an EMU education. Brief reviews of Anabaptist theology and study abroad programs, as they relate to environmental sustainability, are presented in this section of the proposal.

*Environmental sustainability and Anabaptist theology.* In what is probably the single most influential essay on Christianity and the environment, Lynn White argued that "Christianity bears a huge burden of guilt for the ecological crisis" (White, 1967). Very few Christians would dispute White's thesis. Instead, like White himself, Christians have examined their heritage to find resources to enable Christianity to aid in halting and healing the damage done. For some, especially in the 1970s and 1980s, this meant jettisoning much of the tradition as irredeemable with regard to the environment. For others, especially in more recent years, it has meant re-reading and re-interpreting traditional doctrines in light of the ecological crisis. With the exception of the Amish, the Anabaptist story differs little from this general outline. Like the larger Western church, Anabaptist churches are undeniably and culpably complicit in the destruction of the environment. Like the larger church, Anabaptist theology has reacted in both liberal (Ackley Bean, 2000; Kaufman, 1981) and orthodox ways (Finger, 1997). Finally, like the larger church, Anabaptists have searched their history to see what resources it provides for addressing the new challenges presented by global climate change and other imbalances wrought by our inattention. Here, Anabaptist tradition has been ambiguous.

First, Anabaptists, like other Protestants, are handicapped by their rejection of the medieval theological synthesis. Because medieval theologies of creation were closely related to sacramentalism, the sixteenth century rejection of sacraments also entailed the evasion of a theology of creation (Miller, 1990). Further, Anabaptist theology was dualistic. That is, it posited a clear and unambiguous separation between church

and world. In doing so it often, if inadvertently, placed the non-human creation on the side of world (Redekop, 1986).

Second, although Anabaptists have a rich agricultural heritage, that heritage has been double-edged. On one hand, it means that Mennonites have lived in close relationship to the land and seasons for centuries. Persecuted and marginalized, they were forced to live on the most undesirable and unproductive land. As a result, they developed highly creative and sustainable practices in order to nurture it into bloom. With the exception of the Amish, however, that ethic couldn't survive the rise of industrial agriculture. By the late twentieth century, Mennonite farmers, like almost all North American farmers, have had little alternative but to "get big or get out" (Redekop, 1993; Yoder, 2000).

Because of the lack of a clear ethic in their history, Anabaptists learned their environmentalism from others. In particular, they learned it in international service. The growing energy around creation care in the Anabaptist community is due in large part to the way that Mennonites working in international development began to understand how over-consumption in the North affected the poor in the global South. In the mid-1970s Mennonite colleges, under the direction of professors recently returned from international service, began to introduce programs in sustainable agriculture (Brubaker, 1990). Curiously enough, the relevant classic text is a cookbook. Doris Janzen Longacre's *More With Less Cookbook*, published in 1976 by Mennonite Central Committee, has since sold almost 900,000 copies. The book compellingly brought together concerns about global poverty and inequality, population and ecology, and inspired a generation of families to think about how daily decisions impact the environment. Mennonite theologian Gayle Gerber Koontz said of it, "If you consider the theological teaching and witness of this cookbook, its impact far outweighs that of most Mennonite writings in theology and ethics" (quoted in Byler, 2000).



Meanwhile, Anabaptist theology found the necessary resources for an ethic of creation care in its heritage of pacifism. Pacifism, theologians argued, should mean more than nonviolence with regard to fellow humans. We also need to learn how to relate nonviolently to the rest of creation. Redekop (1977) led the way here, but many others soon echoed the claim, so that by 1995 the Mennonite Confession of Faith included the line, "The biblical concept of peace embraces personal peace with God, peace in human relations, peace among nations and peace with God's creation" (Mennonite Church, 1995).

The biennial Mennonite Church convention in 1989 produced a resolution calling for Mennonites to lessen their impact on the environment and promised to educate the church in that regard (Mennonite Church, 1989). This resolve led to the formation of the Mennonite Environmental Task Force, now succeeded by the Mennonite Creation Care Network ([www.mennocreationcare.org](http://www.mennocreationcare.org)). Also significant has been a series of conferences at the Laurelville Mennonite Church Center on topics around sustainability, creation care, food and farming.

During the past four decades, then, Anabaptist theology has evolved to embrace creation care as one of the central tenets of the faith, and the Mennonite Church puts faith into action through education, outreach, and lifestyle choices. A similar progression can be seen in EMU's environmental sustainability values and efforts, from the establishment of the Earthkeepers student club and the international agriculture program in the 1970s, through the energy conservation milestones in the 1980s, to the continued commitment evident today in the work of the Creation Care Council, the recent sustainable building initiatives and the undertaking of the QEP.

*Environmental sustainability and study abroad.* Each year, almost 200,000 students from the United States travel abroad to study (Jirka, 2006). There is a small but growing movement among educators to incorporate broader principles of sustainable

travel in their study abroad programs (NAFSA, 2008). This movement is both a reflection of the broader emphasis on sustainability in higher education practices and curriculum integration, and recognition of the benefits and costs of international travel and tourism.

*“Travel has become a thorny problem now for environmental reasons. In the last few years, as we've learned about the extent of climate change and global warming, it's gotten much harder to just blithely dismiss getting on an airplane and flying around the world. That one airplane trip to wherever you are going requires the consumption of more fuel and more carbon than most people in the world will use in a year for all the tasks of their daily life—not to be taken lightly.”*

-Bill McKibben, Middlebury Scholar-in-Residence in Environmental Studies (Schwarz & Thebodo, 2008)

A recent report by the Association of International Educators Task Force on Environmental Sustainability in Education Abroad (NAFSA, 2008) identified two central questions for international educators:

- 1) How can education abroad program be both high quality and low impact?
- 2) How can education abroad contribute in general to the movement towards greater environmental awareness? (p. 3)

The first of these questions highlights the fact that, although study abroad increases global awareness for participating students, it also involves potentially significant economic, environmental, and social impacts on both the global environment and local communities. By definition international education involves traveling significant distance, usually in the form of long distance flights, and the most obvious global impact is the high CO<sub>2</sub> emissions and oil use associated with air travel (Maginel, 2008).

Although students studying internationally often have the opportunity to experience more significant interaction than the onetime encounter with local residents typical of most tourists, the reality is that students will still engage in tourist activities while studying abroad (Jirka, 2006). Although tourism itself can be an important source of income for developing communities, issues related to resource depletion, economic

inequalities, and waste generation can have significant detrimental effects (Jirka 2006; Sumka, 2006). Thus, international educators need to be aware of the growing movement within the tourism industry seeking to address these issues. This movement is often labeled *ecotourism*, *sustainability travel*, *green tourism*, *ethical tourism*, or *fair trade tourism*, among others, but all can be defined by a philosophy of “responsible travel that conserves the environment and improves the well-being of local people.” (Jirka, 2006). Sustainable Travel International, Ethical Travels, Partners in Responsible Tourism, and the International Ecotourism Society are just a few examples of organizations that now provide resources and guidelines for sustainable tourism (see Appendix D for a detailed list of environmental, socio-cultural, and economic considerations for international travel).

The second question posed by the NAFSA Task Force (NAFSA, 2008) relates to the contribution of study abroad programs to a broader awareness and understanding of environmental sustainability. The international education community is just now beginning to recognize the importance of study abroad programs in sustainability education (NAFSA, 2008). The typical onetime encounter between local residents and most tourists leads to a very superficial view by both participants, and can also lead to stereotyping and idealizing of cultures (Sumka, 2006). The global nature of so many of the sustainable issues requires that any effective sustainable education efforts seek to promote better cross-cultural understanding that is possible through study abroad programs. In particular, study abroad programs characterized by a non-classroom, experiential-based approach with significant home stays, as exemplified by EMU’s cross-cultural experience, foster a deeper understanding of cultural values important to understanding sustainable issues (Lutterman-Aguilar & Gingerich, 2002; Sumka, 2006).

EMU’s “Goals for Cross-cultural Understanding,” which govern its cross-cultural program, specifically address cultural self-awareness, global awareness, religious

understanding, and integration of learning into worldview and lifestyles (see Appendix E). In addition, the host communities associated with EMU's cross-cultural experiences are often developing countries and other countries atypical of other study abroad programs (Open Doors, 2009) – for example, annual programs to Guatemala and the Middle East. Students living and studying in these communities often experience life on a smaller ecological footprint than in the United States, characterized by more public transportation, a reliance on local food, a reduction in energy use, and smaller homes during homestays. Overall, the pace of life is also often slower and community interactions are more socially supportive (Maginel, 2008). These differences often result in lifestyle changes in returning students, particularly in the area of resource use and consumerism (Sumak, 2006; Maginel, 2008). Thus, EMU's study abroad programs are ideally suited to a more deliberate incorporation of learning outcomes related to sustainability as proposed in the QEP.

### **Best Practices in Higher Education**

Cortese and McDonough (2001) described an educational framework that aligns the undergraduate experience with the principles of sustainability. The intended outcome is to produce graduates who are able to apply these principles, using their acquired knowledge, behaviors, and values to make sustainable choices with regard to vocation, consumption, lifestyle, and community involvement. Five themes comprise the proposed educational framework:

- Content – In order for students to recognize and embrace the interdependence of environmental sustainability challenges (e.g., population, energy, consumerism, waste), interdisciplinary systems thinking is encouraged. “Systems thinking is essential to developing a shared framework

for understanding and dealing with complex nonlinear systems that are characteristic of society and the natural world” (p. 3).

- Context – In order to reach all students and not just those specializing in related disciplines, the teaching of sustainability principles and values should span across the curriculum rather than being delivered solely as a special course or program of study.
- Process – The educational process should offer “active, experiential, inquiry-based learning and real-world problem solving on the campus and in the larger community” (p. 3).
- Practice – Students should see a university that operates according to the principles of environmental sustainability. This serves to demonstrate how to live sustainably, as well as reinforces desired outcomes and values.
- Partnerships – Finally, institutions should enter into “partnerships with local and regional communities to help make them socially vibrant, economically secure and environmentally sustainable” (p. 13).

EMU’s QEP explicitly incorporates four of the five recommended themes. (The fifth theme, community partnerships, although not an explicit component of the proposed project, is currently implemented at EMU through the general education community learning requirement and the work of the Creation Care Council.) In addition, the QEP student learning outcomes were loosely adapted from those promoted by the Sustainability Taskforce of the American College Personnel Association of College Student Educators International (ACPA, 2006). EMU’s QEP will also draw from and build on the growing number of successful initiatives among higher education institutions related to sustainability within the general education curriculum, study abroad programs, individual academic majors, and overall curriculum resources.

*Sustainability as a general education requirement.* Many colleges and universities have incorporated the principles of environmental sustainability into their general education curricula by requiring one or more courses on the subject (Rowe, 2002). At some colleges, one specific course in the curriculum satisfies the requirement and is taken by all students; for example, “Environment, Technology and Society” at the University of Northern Iowa and “Globally Effective Citizen” at Alverno College. Other colleges include a sustainability component in their general education distribution requirements, ranging from a single course to several courses. For example, at Wilson, Naropa, and Guilford Colleges, every student must take at least one environmental studies course; at Unity College, all students are required to complete five interdisciplinary courses that focus on sustainability as well as a capstone course in environmental stewardship. Minnesota colleges and universities also demonstrate a significant commitment to sustainability education through the core curriculum. The Minnesota Transfer Curriculum, a cooperative effort across all two- and four-year institutions in the state, operates under the principle of aligning courses to a set of ten common learning outcomes, one of which focuses on environmental challenges.

*Sustainability in study abroad programs.* Overall, the number of initiatives and programs within the field of international education incorporating sustainable principles and practices is relatively small, but there has been recent growth in interest and commitment (NAFSA, 2008). Examples include Abroad View, a nonprofit foundation promoting “international discourse and global citizenship,” that has developed a web site on sustainability and education abroad (Abroad View, 2010). A scholarly listserv “SustainabilityAbroad” was also created by Living Routes in February 2007 and membership has been growing steadily. Programs such as those offered by the School for Field Studies, School for International Training, Living Routes – Study Abroad in Ecovillages, and Earth Education International are promoting study abroad experiences

that focus specifically on studying sustainability issues while lessening the negative impact of travel and living overseas (organization websites are provided in the Reference list).

A few individual colleges and universities such as Warren Wilson College (Warren Wilson College, 2010), Ithaca College (Ithaca Studyabroad, 2010), Middlebury College (Middlebury College, 2010), University of North Carolina-Chapel Hill (University of North Carolina-Chapel Hill, 2010), and Berea College (Berea College, 2009) have made efforts to more broadly incorporate sustainability principles throughout their study abroad programs. Orientation activities for all study abroad groups at Berea College, for example, include a discussion of the environmental impacts of travel and tips for more sustainable travel (Berea College, 2009). Berea has also initiated a “Global Footprint Grant” like that first developed at Ithaca and Middlebury Colleges. The grant is awarded to students who have proposed research about sustainability while abroad, particularly on how an interchange of host country practices with those in the U.S. may be facilitated (Ithaca Studyabroad, 2010).

Many of these efforts and programs at individual institutions have been organized into the most prominent intercollegiate initiative today, the Green Passport program ([www.greenpassport.org](http://www.greenpassport.org)). First organized by educators at the University of North Carolina, Ithaca College, and Middlebury College, the program exists to both provide advice to organizers and educators on how to make their programs more sustainable and as a tool to educate students on responsible and sustainable travel. Students who participate in the Green Passport program are asked to take the following steps, as quoted from the website:

- 1) Increase your AWARENESS of the principles of sustainable travel by reading the article “Going Global: Sustainable Travel and Study Abroad.”
- 2) TAKE THE GREEN PASSPORT PLEDGE:

'As a Green Passport Holder I acknowledge the interconnectedness of the world's people and the environment. I pledge to explore and take into account the social and environmental consequences of studying, living, working, traveling, or volunteering abroad and will try to improve these aspects of my international experience. While overseas, and when I return home, I will do my best to:

- *Minimize my impact on the environment;*
- *Act in culturally respectful ways;*
- *Engage with locals and participate in the local community;*
- *Give back to my host community(ies).'*

- 3) Take ACTION while you are abroad by upholding your pledge, enacting the principles of sustainable travel and by getting involved in other ways that are recommended on the Actions page.
- 4) SHARE what you have learned about sustainable travel and study abroad. Share your experiences, thoughts, ideas, questions, etc. by posting your photos, articles, and/or videos and/or by starting a blog, responding to a forum and/or a user group.
- 5) ADVOCATE. Your involvement doesn't need to end when you return home. We encourage you to take the information you've learned about global sustainability and the Green Passport Program back to your home campus.

*Sustainability across the curricula.* In much the same way as writing and critical thinking competencies have been promoted across higher education curricula, some institutions have taken an interdisciplinary and campus-wide approach to teaching sustainability. The goal of such an approach is to expose students to the sustainability paradigm many times during their educational experience (Rowe, 2002). For example, at Northern Arizona University (NAU), one of the goals of the Ponderosa Project is to "green" the curriculum by introducing and reinforcing environmental sustainability issues throughout a student's educational experience. An interdisciplinary group of faculty work together to plan and implement changes in course content and to develop and share curriculum resources. This is an effective model for raising campus awareness as well as increasing the "ecoliteracy" of both students and faculty. Northern Kentucky University, with the assistance of Second Nature, is also integrating sustainability across the curriculum using the NAU model. Another approach to interdisciplinary integration fosters environmental stewardship at Tuskegee University and other Alabama colleges



and universities. Tuskegee's long-term goals include the integration of environmental sustainability issues into all academic disciplines and this has been accomplished in part by developing faculty workshops that were then shared with Alabama sister institutions.

*Curriculum resources.* Rowe (2002) reports that professional development opportunities for faculty were found to be predictive of successful integration of sustainability topics throughout the curricula. These opportunities are needed for "faculty to learn about sustainability, to develop and refine their course revisions and to share their attempts to integrate these concepts into their courses" (p. 84). There are many such examples of institution-provided resources, some under the auspices of a university-based institute. For example, at the Massachusetts Institute of Technology, the Program on Environmental Education and Research (PEER) assists faculty, staff and students in "developing new content for their courses and performing environmentally-related research to directly impact environmental policies, people's behaviors, or educational systems." Other in-house institutes include the Tufts Institute for the Environment and the University of New Hampshire's Center for Sustainability, both available for use by their respective faculty as well as for use by faculty at other institutions.

The *Peace with Creation* proposal does not seek to duplicate the practices outlined above; rather, the Planning Committee and QEPIT have drawn from these examples in developing our QEP. As noted earlier, our plan is built around the elements of a widely accepted framework for sustainability education. As well, we have incorporated ideas and resources from the best practices cited while being mindful of our institutional capability to implement our plan. In lieu of creating new courses, establishing an institute, or redesigning our cross-cultural program, we envision a robust support system for infusing the principles of environmental sustainability into an already strong and effective curriculum.

**Actions to be Implemented**

In order to accomplish the two overarching goals of the QEP, EMU will approach implementation in two ways: integrating environmental sustainability learning experiences into the curriculum and promoting environmental sustainability practices throughout campus life. The campus life component will be implemented through the University's institutional effectiveness process and will entail each department developing an operational outcome related to sustainability practices. Examples of such outcomes include participation in sustainability projects, attendance at sustainability events, achievement of goals related to sustainable practices such as use and management of resources or waste. Each department will articulate sustainability outcomes, measure the extent to which they are accomplished, and institute any necessary improvements. In addition to the oversight built into the institutional effectiveness reporting process (the Institutional Effectiveness Committee audits annual reports for quality, department-level reports are reviewed by the appropriate vice-president, and key issues are brought to the SPC), the QEPIT will also assist in the oversight for this component of the QEP by assisting in the development of outcomes as well as compiling and analyzing outcomes and results as described in the *Assessment* section of this proposal. We anticipate that half of university departments will develop outcomes for inclusion in the 2009-10 effectiveness cycle, with 100% participation in 2010-11. This component of the project is expected to impact the entire campus community.

As shown in Table 1, the curriculum component will primarily be delivered to traditional undergraduate students through courses in EMU's general education program, the Global Village Curriculum (GVC). In addition, faculty in each academic major will also incorporate and address, in at least one required course, how the principles of environmental sustainability can be integrated into the field or discipline

(student learning outcome 4). Even though this curriculum plan focuses on traditional undergraduate students without targeting other student populations (adult degree completion, graduate, and Seminary students), the QEPIT determined that the proposed scope of the plan is “sufficiently broad to be viewed as significant to the institution and as a major enhancement to student learning” (Commission on Colleges, 2008, p. 9).

Table 1

*Summary of the Plan for Curriculum Integration*

<b>Curriculum Area</b>	<b>Course(s)</b>	<b>Learning Outcomes</b>	<b>Delivery Method</b>	<b>Implementation Timetable</b>
GVC	Anabaptist Biblical Perspectives	1	Although specific approaches vary by course, all will provide a review of the theological basis for environmental sustainability	Fall 2010 – 50% Fall 2011 – 100%
	College Writing for Transitions	2, 3, 5	Sustainability topics and readings, at least one writing prompt focusing on environmental sustainability; research paper focuses on a sustainability-related topic	Fall 2010
	Off-campus Cross-Cultural experiences	2, 3, 5	Students will explore impact of travel; one or more environmental sustainability issues will be identified in host community.	Fall 2011
Academic majors	One required course identified by faculty	4	Varies by course	Fall 2010 – 33% Fall 2011 – 100%

*Curriculum areas.* As part of the Christian Faith component of the GVC, all undergraduate students choose one of four Anabaptist Biblical Perspectives (ABP) courses offered by the Bible and Religion Department. These courses include ABP 101,

Introduction to the Bible; ABP 112, Becoming God's People: Old Testament Themes; ABP 123, Following Jesus Christ: New Testament Themes; and ABP 201, Ethics in the Way of Jesus. These classes will be the primary venue for addressing student learning outcome 1, which focuses on the theological foundation and justification for environmental sustainability. All ABP classes will include this learning outcome on the syllabus and a common assessment method will be developed and applied across the courses.

All first-year undergraduates complete a college writing course (WRIT 130, College Writing for Transitions; or WRIT 140, Advanced College Writing) as part of the Communication component of the GVC. These first-year courses emphasize interdisciplinary academic reading, thinking, and writing skills. Beginning in fall 2010, environmental sustainability topics will be utilized in the readings, and a minimum of one reflective writing prompt aligning most closely with learning outcome 5 will be assigned early in the semester (see Appendix F). Students will also be required to complete a research paper that examines sustainability as it relates to their majors or areas of interest. All course sections will require at least one common text related to the environment – for example, *Listening to Earth* (2005) written by Christopher Hallowell and Walter Levy.

The Cross-Cultural component of the GVC requires an off-campus immersion experience devoted to experiential intercultural learning and engagement. Because such experiences have an environmental impact and because there are cultural differences in how sustainability issues are perceived, valued and managed, the Cross-Cultural experience is an ideal curriculum integration point for learning outcomes 2, 3, and 5. Students will learn how to evaluate the impact of their group's travel during their cross-cultural experience through ecological footprint comparisons, logging of resource use, exploration of carbon offsetting, or similar exercises either while in the host country or

during orientation. In addition, students will identify sustainability issues in their host community and explore how responses to these issues are reflective of the broader host culture. Upon returning to EMU, each cross-cultural group will be provided an opportunity to deliver a campus-wide presentation about their experience, including their learning and development with regard to environmental sustainability. Finally cross-cultural leaders will also report on sustainability efforts and learning experiences in their final written reports and debriefing.

As suggested by the focus of the outcome itself, learning outcome 4 (integrating the principles of environmental sustainability within the discipline) will be addressed in a required course in each academic major. Department faculty will choose the course, include the outcome on the course syllabus, and integrate discipline-related sustainability concepts into course delivery. Students will complete an assignment that requires them to identify and analyze sustainability issues and to devise sustainable solutions and best practices.

*QEPIT role in implementation.* The QEPIT will assist in integrating environmental sustainability across the curriculum by:

- supporting GVC instructors and cross-cultural leaders in implementing the QEP learning outcomes in their courses;
- helping departments to identify QEP courses in the major and modify their syllabi and course content accordingly;
- providing participating faculty members with scholarly resources such as content, reading lists, pedagogical consultation, and sample assignments; and
- providing yearly assessment training workshops (e.g., development and use of rubrics) and professional development opportunities (e.g., outside speakers and/or workshops on sustainability in higher education).

The QEPIT will also assist academic and administrative departments in identifying and developing operational outcomes for annual institutional effectiveness reporting. The reports will be audited to ensure that environmental sustainability outcomes are included, are appropriate, and can be measured. In addition, the QEPIT will compile and analyze results in order to evaluate the success of this component of the QEP. Finally, the QEPIT welcomes the opportunity to incorporate suggestions from the reaffirmation committee, especially regarding the key questions and issues presented in Appendix K.

### **Timeline**

The proposed project timeline is presented in Table 2. Although most elements of the QEP will be introduced in the fall of 2010, the QEPIT has already taken several steps toward successful implementation of the plan. The groundwork has been laid with the administration and key academic leaders, and we have launched a promotional campaign to raise awareness throughout the campus community. In addition, we have taken advantage of two data collection opportunities with first-year students to obtain baseline data with respect to several student learning outcomes.

Table 2

*QEP Timeline*

<b>2008</b>	Fall	Baseline data collected from fall 2008 first-year students (New Ecological Paradigm scale, definition of environmental sustainability, list of sustainable practices)
<b>2009-10</b>	Fall	QEP Implementation Team (QEPIT) appointed and submits QEP proposal
		Baseline data collected from fall 2009 first-year students (New Ecological Paradigm scale, definition of environmental sustainability, list of sustainable practices)
	Spring	QEP promotional activities, including QEP website
		SACS On-site Review Committee, March 2 – 4
		QEPIT develops resources for instructors, to include assignments and rubrics
		Academic departments begin to identify required courses in which to integrate environmental sustainability
		Departments begin to develop operational outcomes related to environmental sustainability to include in effectiveness report
	Summer	Sharing of resources and discussions on curriculum integration
QEPIT creates initial effectiveness report for QEP		
<b>2010-11</b>	Fall and Spring	Curriculum integration begins in GVC (all College Writing for Transitions sections and 50% of ABP classes) and in 33% of major programs
		QEPIT audits course syllabi to ensure QEP outcomes are included
		Institutional Effectiveness Committee (IEC) audits effectiveness reports to ensure a minimum of 50% have included QEP operational outcomes
		QEPIT attendance at AASHE Sustainability Across the Curriculum Leadership Workshop (Jan. 2011)*
		QEPIT conducts assessment training sessions for College Writing and participating major program course instructors
		QEPIT conducts or arranges campus sustainability workshop or speakers for faculty and staff professional development

	Summer	Office of Institutional Research and Effectiveness (OIRE) analyzes assessment data from training sessions and makes recommendations regarding assignment and/or rubric improvement
		QEPIT analyzes project status and progress; makes improvements to resources, processes and procedures where necessary; updates website and QEP effectiveness report
<b>2011-12</b>	Fall	Curriculum integration continues, with implementation into GVC, cross-cultural experiences and 100% of ABP courses and major programs; incorporate any necessary changes to assignments and rubrics in 2010-11 participating courses
		Collect baseline data from fall 2011 first-year students (New Ecological Paradigm scale, definition of environmental sustainability, naming of sustainable practices)
		QEPIT conducts training sessions for College Writing for Transitions instructors, cross-cultural leaders and participating major program course instructors
		QEPIT conducts or arranges campus sustainability workshop or speakers for faculty and staff professional development
	Spring	Post-test for fall 2008 cohort (New Ecological Paradigm scale, definition of environmental sustainability, list of sustainable practices)
		Work on QEP operational outcomes continues (development, promotion, data collection), with remaining 50% of outcomes developed
		QEPIT audits course syllabi; IEC audits effectiveness reports
	Summer	OIRE collects and analyzes assessment data from individual courses and course sections from each semester
		QEPIT analyzes project status and progress to include academic assessment results and news from QEP operational outcomes; makes improvements to resources, processes and procedures where necessary; updates website and QEP effectiveness report
<b>2012-15</b>	Fall	Curriculum integration continues at all levels for academic year
		Work on improvement of QEP operational outcomes continues (development, promotion, data collection) for academic year
		Collect baseline data from first-year students (New Ecological Paradigm scale, environmental sustainability definition, list of sustainable practices)
		QEPIT conducts yearly training sessions for GVC and participating major program course instructors
		QEPIT conducts or arranges yearly campus sustainability workshop or speaker for faculty and staff professional development



	Spring	Post-test (New Ecological Paradigm scale, environmental sustainability definition, list of sustainable practices)
		QEPIT audits course syllabi; IEC audits effectiveness reports
	Summer	OIRE collects and analyzes assessment data from individual courses and course sections from each semester
		QEPIT updates QEP website and effectiveness report
<b>2015</b>		Five-year progress report for SACS

\*As quoted on the website, "AASHE's Sustainability Across the Curriculum Leadership workshops are for faculty leaders of all disciplines who wish to develop curriculum change programs around sustainability on their campuses."

**Organizational Structure**

The QEP Implementation Team will have primary responsibility for administration and oversight of the QEP as described in Table 3.

Table 3

*QEP Implementation Team Membership and Roles*

<b>Team Member</b>	<b>Description of Role</b>	<b>Appointed Member*</b>
Chair	Provide resources for faculty; act as spokesperson for project	Jim Yoder, Professor of Biology
Faculty representatives (2)	Provide content and pedagogical expertise; faculty liaisons	1. Peter Dula, Asst. Professor of Bible & Religion 2. Heidi Winters Vogel, Assoc. Professor of Theater
Creation Care Council member	Provide content expertise; coordinate campus sustainability projects	April Banks, MBA student and Sustainability Coordinator (intern)
Communications	Design and update website; promote project	Ben Beachy, Application Development Manager
Data	Collect and analyze data	BJ Miller, Director of Institutional Research & Effectiveness
Student representatives (3)	1. At-large student body liaison 2. Student Government Association representative 3. QEP Intern (research, promotion, data collection and management, student body liaison)	1. Lisle Bertsche 2. Katie Landis 3. To be hired fall 2010
Administrative Support	Scheduling, budget management, general administrative support	Cheryl Doss, Science Center Secretary/Coordinator

\*The individuals appointed as QEPIT Chair, Data, and Administrative Support will serve for the duration of the QEP; the remaining members will serve two year terms, with replacement members appointed by the provost.

In addition to the personnel listed above, the project will be facilitated by the Global Village Curriculum Committee, the Cross-Cultural Committee, Graduate and Undergraduate Councils, and the Institutional Effectiveness Committee. The GVC Committee, Cross-Cultural Committee, and academic councils will provide avenues for communicating with core curriculum instructors, cross-cultural leaders, and academic department chairs, respectively; as well, these groups will also be involved in shaping the specifics of the curriculum integration component of the project. The Institutional Effectiveness Committee audits University effectiveness reports each year to ensure the quality and completeness of the effectiveness process. With the advent of the QEP, the

audit will also ensure that academic and administrative units include operational outcomes related to environmental sustainability and that they appropriately measure such outcomes. Departmental outcomes and results will be excerpted from the effectiveness reports in order to publicize successes and promote awareness of the QEP across campus. The institutional effectiveness process will also be the mechanism for informing the University administration about the status and progress of the QEP. The QEPIT will produce an annual institutional effectiveness report in the same format and on the same schedule as every other unit in the university. The report will include sections for reporting assessment results for both student learning and operational outcomes, as well as sections for reporting on resources, budget, and future plans. The Provost will have oversight for the QEP effectiveness report and will report key findings and progress to the Strategic Planning Council.

During the spring of 2010, the QEPIT is meeting weekly. QEPIT work will resume prior to the start of classes in fall 2010 when curriculum resources will be developed and shared with faculty. Future meeting schedules have not been determined, but, at a minimum, will include two workshops/training sessions per academic year and one summer meeting to review project status, assessment results, and any required changes or improvements. This summer review will provide the content for the QEP's institutional effectiveness report.

### **Resources**

As previously noted, one of the primary considerations in the development of our QEP proposal was the sustainability of the project itself. We believe that our plan (Table 4) provides ample personnel, resources, and supplies to implement the project as proposed.

Table 4

*Preliminary QEP Budget*

<b>Line item</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
Release time for QEPIT Chair (FTE/year)	9000 (1/8)	27000 (3/8)	18000 (1/4)	18000 (1/4)	18000 (1/4)	18000 (1/4)
Student Intern (8 hours/week for 30 weeks @ \$8.00/hr)		1920	1920	1920	1920	1920
General supplies (including copying, printing, promotional materials)	2000	500	250	250	250	250
Library and other curriculum resources		2000	1500	1000	1000	
QEPIT member attendance at AASHE Integrated Curriculum Workshop (or similar training)		2000	1000			
QEPIT member attendance at SACS Annual Meeting		1000		1000		1000
Assessment Training Workshops (materials, refreshments)		350	350	350	350	350
Professional Development Speakers/Workshops		2000	1000	1000	1000	1000
<b>Total</b>	<b>\$11000</b>	<b>\$36770</b>	<b>\$24020</b>	<b>\$23520</b>	<b>\$22520</b>	<b>\$22520</b>

Fiscal Year 2010 funds were reallocated from the University's SACS Reaffirmation budget line. The budget for the remaining period of QEP implementation represents new funds allocated specifically for the QEP. As a faculty member, the QEPIT chair is currently loaded at one-eighth full-time-equivalent (FTE) release time, and load time has been budgeted for the chair throughout the duration of the project as shown in Table 4.

**Assessment**

The two overarching goals of the QEP provide the framework for evaluating its success. Assessment of student learning with respect to the five student learning outcomes will speak to the success of the first goal: to strengthen our care for God's

creation by enhancing our knowledge, values, and actions. Our assessment plan will allow us to determine the extent to which students 1) increase their sustainability knowledge and endorsement of an environmental worldview, and 2) meet faculty expectations with respect to each of the student learning outcomes. In addition, we will be able to determine the extent to which we achieve the second overarching goal, to increase sustainable practices at EMU, through the annual compilation and analysis of the operational outcomes data that will become part of the institutional effectiveness process. Each year, these data will be recorded and compared to the baseline data from the first year of implementation (2010-11) in order to determine the extent to which sustainable practices at EMU have increased.

Much as curriculum integration is a major focus of implementing our QEP, the assessment of student learning outcomes will be the cornerstone of evaluating its success. The assessment plan includes both direct and indirect measures, and multiple measures will be used to make inferences about each learning outcome as well as about the attainment of the learning outcomes as a whole. Our assessment plan relies heavily on course-embedded assessment using faculty-developed rubrics. As described by Eubanks (2008), this can be an invigorating and successful approach, and we chose it for two primary reasons: 1) student motivation to perform their best on these assignments should be high, thus increasing the validity of the scores; and 2) the development and use of rubrics will require conversation among faculty and across departments, making assessment results more meaningful and useful. We do, however, recognize that there are limitations to this approach, the foremost being the risk of low inter-rater reliability. Therefore, the QEPIT, led by the director of institutional research and effectiveness, will conduct assessment training sessions each year. These sessions will focus on the development and refinement of the rubrics, practice using the rubrics, and discussion and interpretation of assessment results. A primary goal of these

sessions will be to “calibrate” the various rubrics; that is, to ensure that all faculty interpret and use the rubrics in the same way in order to produce reliable scores.

*Baseline data (learning outcomes 1, 3, and 5).* In fall 2008 and fall 2009, incoming freshmen completed the QEP Questionnaire, a 20-item instrument that includes

- the New Ecological Paradigm scale (NEP; Dunlap, Van Liere, Mertig, & Jones, 2000),
- three additional items addressing a Christian perspective on the environment, and
- two open-ended, short answer items inviting students to define environmental sustainability and to list sustainable practices.

The QEP Questionnaire is provided as Appendix G.

The NEP is a 15-item scale with five response options, where a response of five indicates endorsement of an environmental worldview (seven items are reverse-coded). Adding the three Christian perspective items (one reverse-coded) resulted in an 18-item scale, henceforth referred to as the New Ecological Paradigm-Revised (NEP-R). Total scores on the NEP-R may therefore range from 18 to 90, with higher scores indicating stronger endorsement of the construct.

Dunlap et al. (2000) reported that the NEP has been used extensively to measure beliefs “about the nature of the earth and humanity’s relationship with it” (p. 427). They also cited many studies in which scale scores demonstrated satisfactory reliability and that provided evidence of predictive, content and construct validity. The NEP has been used successfully with American college student populations, and we consider it a compelling measure of the extent to which environmental sustainability is incorporated into a student’s value system (learning outcome 5). The QEP Planning Committee determined, however, that the scale would better serve our purposes if it also

addressed the concept of sustainability as founded in Christian theology. Thus, we revised the scale to the NEP-R, which includes three new items for this purpose (see items 6, 12, and 18 in Appendix G). In addition to the 18 Likert-type items comprising the NEP-R, the QEP Questionnaire includes the following open-ended, short answer items that align with learning outcomes 1 and 3, respectively: “What is your definition of ‘environmental sustainability’?” and “List three things individuals can do to promote environmental sustainability.”

Similar to the NEP responses in the Dunlap et al. (2000) study, the NEP-R demonstrated unidimensionality in both EMU samples when subjected to principal axis factoring; therefore, a total score will be reported. However, because of our revision to the scale, this score will not be comparable to NEP scores reported in the literature. Thus, in lieu of a benchmark comparison, we will instead monitor change over time by administering the NEP-R as a post-test to each cohort during their senior year. Table 5 summarizes results from two administrations of the NEP-R to entering freshmen.

Table 5

*New Ecological Paradigm Scale-Revised: Descriptive Statistics, Fall 2008 and Fall 2009*

<b>Semester</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Reliability (Cronbach’s <math>\alpha</math>)</b>
Fall 2008	162	60.96	9.67	.73
Fall 2009	185	59.92	8.19	.76

Total score reliability was considered acceptable for the purpose of program assessment, and the cohorts scored at similar levels on the scale. With a maximum score of 90 indicating complete endorsement of an environmental paradigm or worldview, it seems that scores for EMU freshmen indicate some acceptance of that paradigm but also an opportunity for the QEP to make a positive impact.

Preliminary analyses of the two short answer items from the fall 2008 QEP Questionnaire (define environmental sustainability and list actions that promote sustainability) suggest that our incoming freshman have a rather one-dimensional, simplistic, and narrow view of the topic. With respect to learning outcome 1, the initial approach to scoring the definition item involved coding the responses according to the presence of the four themes found in our working definition of environmental sustainability: 1) ecological, 2) economic and/or social, 3) theological, and 4) forward-looking. Thus, each response could receive a minimum of zero and a maximum of four points. A majority of responses (60%) included only one theme, and 99% of these were the more obvious ecological theme. Further, no responses referred to all four themes, three percent to three themes, and only 37% referred to two themes. Again, the ecological theme was cited most often, followed by looking to the future (32%), theology (7%), and economic/social issues (5%).

Of 103 unique environmental actions listed, “recycle” comprised over 80% of the responses (listed 83 times). Although recycling is an important and effective action that promotes environmental sustainability, we expect that one of the impacts of implementing QEP learning outcome 3 will be to evoke a broader, more comprehensive list in response to this item on the post-test occasion. Overall, the 378 listed actions were sorted into ten categories, with the following categories most often represented: waste (128 or 34%), transportation (54 or 14%), political or consumer actions (53 or 14%), and environmental clean-up (39 or 10%). In summary, almost three-fourths of the responses were sorted into one of only four major environmental categories. The remaining categories, in order of frequency, were natural resources, energy, miscellaneous, water, and building. Although these responses generally represent the categories of actions we expect to see, there should be a more equal distribution of the suggestions across the categories at the post-test occasion.



The fall 2008 analyses of the qualitative data from the QEP Questionnaire were conducted by the director of institutional research and effectiveness. Future analyses of these two items will involve additional raters as well as discussion and possible revision of the analytic method, as determined by the QEPIT.

In addition to the NEP-R as a direct measure of learning outcome 5, we plan to also monitor a specific survey item that appears on two commercial surveys that we administer periodically: the CIRP Freshman Survey and the College Senior Survey. The item asks students to rate the importance of the life objective “becoming involved in programs to clean up the environment.” As a result of the QEP, we expect students to rate this item much more highly as seniors than as freshmen. Results from previous administrations of these surveys are presented in Table 6 and show that there has been generally increasing importance placed on this objective and that students generally rate it as being somewhat more important when they are seniors than when they were freshmen.

Table 6

*Percent of Students Rating the Environmental Objective as “Essential” or “Very Important”*

<b>Survey Year</b>	<b>CIRP (Freshmen)</b>	<b>CSS (Seniors)</b>
2000	9.9	20.6
2002	12.9	16.1
2004	17.1	13.5
2006	17.9	23.6
2008	22.2	17.0

*Anabaptist Biblical Perspectives (learning outcome 1)*. In order to complete GVC requirements, students must choose one of four Anabaptist Biblical Perspectives (ABP) courses. As part of the QEP, grounding the definition of environmental sustainability in a theological foundation will be incorporated into all sections of these courses. The learning outcome will be included on the syllabus for each course and a common assessment method will be developed and applied across the courses. Possibilities for this assessment include a common item on the final exams for each course, a common assignment across all courses, or simply a common rubric applied to any assignment within each course.

*College Writing for Transitions (learning outcomes 2, 3, and 5)*. Two QEP assignments will be administered across all sections of College Writing for Transitions. The first assignment, a writing prompt given near the beginning of the semester (see Appendix F), aligns most closely with learning outcome 5. The prompt was piloted in fall 2009, and these first QEP writing samples will be used for assessment training – they can be useful for developing rubric criteria for this learning objective and for standardizing instructors' application of the rubric. Beginning in fall 2010, writing samples from this prompt will be used for program assessment, providing a supplemental baseline measure of outcome 5 and a validity check for the NEP-R.

The other College Writing for Transitions QEP assignment will be the required research paper that students complete near the end of the semester. Prior to QEP implementation, students chose a topic related to their major or other area of interest for this paper and it was graded using the college-wide writing rubric. Beginning in fall 2010, students will be required to develop their research papers around an environmental sustainability-related topic in their area of interest. The writing rubric has been modified to accommodate the additional QEP learning outcomes that are aligned with this assignment (learning outcomes 2 and 3; see Appendix H for a draft of the rubric).

*Cross-Cultural (learning outcomes 2, 3, and 5).* Traditional undergraduate students who fulfill their cross-cultural requirement off-campus will complete a minimum of two assignments that are aligned with QEP outcomes 2, 3, and 5. Ideas for these assignments are presented in Appendix I, and rubrics will be used in order to assess the extent to which students meet faculty expectations in these areas. It is expected that the Content portion of the writing rubric presented in Appendix H will be used to assess the first assignment, which aligns with learning outcomes 2 and 3. In this way, we will obtain two measurements on these outcomes using the same instrument on different occasions.

*Required courses in the major (learning outcome 4).* A common rubric will serve as the assessment tool across all sections of required courses selected for inclusion in the QEP curriculum. Instructors for these courses will select or develop an assignment that allows students to demonstrate how environmental sustainability principles integrate with concepts, theories, or practices in the student's discipline (learning outcome 4). Results will be aggregated across courses each semester so that we can 1) make inferences about the extent to which students have met faculty expectations with respect to this outcome and 2) design and implement any curricular or pedagogical improvements that may be identified. See Appendix J for a draft of the rubric that is aligned with learning outcome 4.

*Data collection and analysis.* The Office of Institutional Research and Effectiveness (OIRE) will maintain the central data repository for QEP assessment. Each year, the director will excerpt operational outcomes, results and analyses relating to the QEP from annual effectiveness reports. These data will be aggregated and summarized in order that the QEPIT may evaluate progress on the second overarching goal of the project: to increase sustainable practices at EMU.

The majority of student learning outcomes data will be provided by individual course instructors as scores on QEP rubrics. Instructors will enter these scores directly into EMU's student information system, from which the OIRE director can extract them for aggregation and analysis. In addition, OIRE administers the out-of-class assessments that measure the student learning outcomes. The QEP questionnaire has been administered as a paper-and-pencil instrument during freshman orientation on both pre-test occasions, and data entry and analysis were conducted by OIRE. This process will likely continue for the freshman pre-test; however, the post-test for seniors will likely be administered as a web-based questionnaire. The other out-of-class measures, the CIRP and the CSS, are commercial surveys that are administered by OIRE, with data entry and analysis provided by the Higher Educational Research Institute.

Our assessment plan will allow us to answer two questions about the impact of the QEP on student learning:

1. Did students increase in their sustainability knowledge and endorsement of an environmental worldview over time?
  - pre- and post-test scores on the NEP-R
  - pre- and post-test definition of environmental sustainability
  - pre- and post-test list of sustainable practices
  - comparison of rubric scores for learning outcomes 2 and 3 on College Writing for Transitions research paper and Cross-Cultural assignment 1
  - pre-post comparison of endorsement of CIRP/CSS item
2. Do students meet faculty expectations for learning in each of the QEP outcomes?

- Each rubric (at least one rubric aligns with each outcome) will clearly identify minimum expectations

In addition, assessment results will be used formatively in order to make continuous improvements in the implementation of the plan. Table 7 summarizes the assessment plan for the QEP student learning outcomes.

Table 7

*Assessment Plan for QEP Student Learning Outcomes*

<b>Student Learning Outcome</b>	<b>Assessment Methods</b>	<b>Assessment Schedule</b>
1. Define and justify environmental sustainability from a theological perspective.	<ul style="list-style-type: none"> <li>• QEP questionnaire (open-ended item)</li> <li>• ABP embedded assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Fall (Freshmen) and Spring (Seniors)</li> <li>• Fall and spring</li> </ul>
2. Explain how individual, institutional, and community actions impact the environment.	<ul style="list-style-type: none"> <li>• Research paper in College Writing</li> <li>• Cross-cultural experience exercises</li> </ul>	<ul style="list-style-type: none"> <li>• Fall semesters</li> <li>• Fall and spring</li> </ul>
3. Name and defend actions that promote environmental sustainability at the individual, institutional, and community levels.	<ul style="list-style-type: none"> <li>• QEP questionnaire (open-ended item)</li> <li>• Research paper in College Writing</li> <li>• Cross-cultural experience exercises</li> </ul>	<ul style="list-style-type: none"> <li>• Fall (Freshmen) and Spring (Seniors)</li> <li>• Fall semesters</li> <li>• Fall and spring</li> </ul>
4. Integrate the principles of environmental sustainability within the student's discipline.	<ul style="list-style-type: none"> <li>• Course-embedded assessment – common rubric applied to a relevant assignment in a required course in the major</li> </ul>	<ul style="list-style-type: none"> <li>• Fall and spring</li> </ul>
5. Incorporate environmental sustainability into one's values system.	<ul style="list-style-type: none"> <li>• Writing prompt in College Writing</li> <li>• QEP questionnaire (New Ecological Paradigm scale)</li> <li>• Cross-cultural experience presentation</li> <li>• Survey items (CIRP and CSS)</li> </ul>	<ul style="list-style-type: none"> <li>• Fall semesters</li> <li>• Fall (Freshmen) and Spring (Seniors)</li> <li>• Fall and spring</li> <li>• Every 3 years</li> </ul>

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Additional Internet resources:

<http://www.fieldstudies.org/>

<http://www.worldlearning.org/>

<http://www.LivingRoutes.org>

<http://www.earthedintl.org/>

<http://www.aashe.org/profdev/curriculum.php>

APPENDIX A

QEP PLANNING COMMITTEE

Cathy Smeltzer Erb, *Chair and Professor of Education*

Linetta Ballew, *Seminary student*

Kenton Derstine, *Director of Clinical Pastoral Education*

Peter Dula, *Assistant Professor of Bible & Religion*

Janelle Freed, *undergraduate student*

BJ Miller, *Director of Institutional Research & Effectiveness*

Laurie Miller, *Director of Student Programs & Recreational Sports*

Kevin Nickel, *Controller*

Greg Sachs, *Network administrator*

Dan Sigmans, *undergraduate student*

Lee Snyder, *Interim Provost (ex officio)*

Rachel Spory, *Administrative Assistant*

James Yoder, *Professor of Biology*

## APPENDIX B

## QEP: PROJECT DEVELOPMENT TIMELINE

<b>Date</b>	<b>Milestone</b>
January 24, 2007	Strategic Planning Council (SPC) winter retreat; identification of key issues
August 20, 2007	SPC summer retreat; eleven possible QEP topics
October 24, 2007	SPC meeting; identification of five topics for serious consideration and further processing: faith development, environmental sustainability, a teaching and learning center, residential learning communities, and the Global Village Curriculum
November 10, 2007	Board of Trustees meeting; discussion of five topics
November 26, 2007	University Forum; discussion of five topics by faculty and staff
January 7, 2008	Seminary Community Council meeting; discussion of five topics by Seminary students
January 15, 2008	Coffeehouse event for students; discussion of five topics
January 26, 2008	Parent's Council meeting; discussion of five topics
January 30, 2008	SPC meeting; identification of three leading topics: environmental sustainability, a teaching and learning center, and residential learning communities
February 18, 2008	Faculty Assembly; presentation, discussion and collection of feedback on three topics
February 22, 2008	Coffeehouse event for students; presentation, discussion and collection of feedback on three topics
March-April, 2008	Spring 2008 edition of <i>Crossroads</i> ; solicitation of feedback from alumni on three topics
March-April, 2008	On-line voting by faculty and staff to select the QEP topic
April 23, 2008	SPC meeting; affirmation of environmental sustainability as the QEP topic
June 28, 2008	Board of Trustees meeting; approval of topic
August, 2008	President appointed the QEP Planning Committee was appointed by the president in August, 2008 1 <sup>st</sup> meeting September 17, 2008.
September 17, 2008	First meeting of QEP Planning Committee
March 23, 2009	University Forum; QEP Planning Committee presented summary of work and outline of QEP implementation ideas faculty and staff
March-April, 2009	On-line approval voting of Planning Committee work; 97% approval
April 30, 2009	Faculty Staff Conference; final outline of QEP proposal presented to faculty and staff
June 18, 2009	Faculty Staff Conference; final outline of QEP proposal presented to faculty and staff
September 21, 2009	President appoints QEP Implementation Team

APPENDIX C

EMU CREATION CARE COUNCIL MEMBERSHIP  
AND SUSTAINABILITY PRINCIPLES

**Creation Care Council, Executive Committee**

Jeremy Good, Network Systems Manager (Co-chair)  
Andrea Wenger, Director, Marketing and Communications (Co-chair)  
April Banks, MBA graduate student, Campus Sustainability Coordinator  
Peter Dula, Asst. Professor of Bible and Religion  
Tara Kishbaugh, Assoc. Professor of Chemistry  
Eldon Kurtz, Physical Plant Director  
Jonathan Lantz-Trissel, Recycling and Waste Reduction Coordinator  
Doug Graber Neufeld, Professor of Biology  
Ron Piper, Vice President for Finance  
Dorothy Jean Weaver, Professor of New Testament  
Jim Yoder, Professor of Biology  
Jakob zum Felde, undergraduate student representative

**Sustainability Principles**

*Revised and Adopted November, 2009*

Eastern Mennonite University is an institution founded upon, and dedicated to, the Christ-centered principles of community, service and mission, peacemaking, and stewardship.

As Christians in the Anabaptist tradition, we believe God calls us to care for each other and creation. This biblical call to creation care is motivated both by a desire to make practical choices for the institution and to make ethical choices in how we live together and in the world.

Acknowledging that human activity has led to significant degradation of the earth's environment, we seek corporately and individually to reverse the damage that may prevent future generations from living healthfully and productively.

Building on EMU's early commitments to environmental sustainability, we articulate our mission for sustainability in these five areas.

**Education, Curriculum & Theology**

Our graduates learn by participating in a sustainable lifestyle on campus. This happens in the classroom, as part of student activities, through campus ministries and in relationships with others. EMU alumni take this environmental literacy with them to

inform lifelong choices. Knowing that it can be difficult to challenge the status quo, we draw on Anabaptist heritage to question and resist the broader culture's emphasis on consumerism, believing that environmental degradation can be reduced by choosing a simpler, humble lifestyle.

### **Community Relationships**

Our communities are those in our immediate surroundings; but they include affinity groups that extend globally as well. We nurture relationships with others who share our sustainability goals, and acknowledge that our environmental choices can build or damage communities.

### **Resource Management**

We view resources, including food and energy, as part of a system, with the ultimate goal of eliminating the concept of waste. We promote patterns of resource use that are part of a sustainable cycle, and minimize negative impacts to the earth and its inhabitants.

### **Transportation**

We promote modes of transportation that are healthy and minimize use of non-renewable energy. We consider transportation on-campus and beyond.

### **Built Environment**

Academic excellence, creative process, professional competence, and passionate Christian faith are supported by the built environment. Because buildings and grounds are a significant part of a greater learning environment we strive to create a built environment that is sustainable in energy consumption, design and use.

As our interaction – as individuals, an institution and human race – with the environment continues to unfold, we expect to use these principles to assess our goals and progress, with a desire for continual improvement.

## APPENDIX D

### INTERNATIONAL TRAVEL: SUSTAINABILITY CONSIDERATIONS (Jirka, 2006)

#### **Environmental Considerations**

Learn about current environmental issues in the places you are visiting. Different regions will have different situations based on their ecosystems. Learn about the effects of mass tourism on beaches, mountains, wetlands, deserts, etc. and then seek to counter those effects.

▶ **Use accommodations that have a reputation for being sustainable** (they recycle, use alternative forms of energy, are owned by or employ locals, contribute to local causes). Increasingly, there are regional and national certification systems that accommodations can obtain if they are sustainably operated, much like the organic labeling system. Check to see if there are any local certification labels that can help you to determine where to stay. Search the Internet to do this (country name + tourism certification) or inquire with the visitors bureau or local tourism offices.

▶ **Use water sparingly.** Many communities face water shortages and water usage costs money. Take quick showers.

▶ **Save electricity.** Turn off lights, air conditioners, and heaters when you are not in the room.

▶ **Don't litter!** Even if you notice the locals doing so, try to find a container to dispose of your litter. Always recycle if possible.

▶ **Don't buy products made from endangered species or valuable, historical, or cultural artifacts.** Ask about where a product comes from. Many of these products are illegal to export. Report incidences to local or national conservation organizations.

▶ **Don't disturb the wildlife.** Maintain a proper distance at all times. Don't use loud, motorized equipment among small communities of people or in areas where there is wildlife.

▶ **Don't pick up and take home natural resources such as shells, plants, animal bones, etc.**

▶ **If you go camping, make sure you have any necessary permits and follow local park rules.** Pack out what you pack in. Stay on trails.

▶ **Choose your recreational activities wisely.** Low impact sports that don't involve a lot of equipment or fossil fuels and that don't disturb the environment or local communities are preferable.

▶ **Use local and public transport whenever possible.** Take a train or bus. Bike or walk. Try to fly less—airplanes produce massive amounts of ozone-depleting carbon dioxide.

▶ **Carbon Offsetting.** If it is within your budget contribute money to an organization involved in carbon offsetting every time you fly. They will, in turn, contribute money to worthy organizations that are involved in projects that seek alternative energy sources, plant trees, etc. in order to reduce the amount of ozone-depleting carbon in the atmosphere, largely caused by air traffic. They will determine how much you need to spend based on the amount of miles you have flown. Check with **Sustainable Travel International** ([www.sustainabletravelinternational.org](http://www.sustainabletravelinternational.org); go to "Our Programs"—Carbon Offsetting). You can also check with **Carbon Neutral** ([www.carbonneutral.com/index.asp](http://www.carbonneutral.com/index.asp)).

### **Socio-Cultural Considerations**

- ▶ **Research your destination.** Learn about its history, political situation, current events, cultural groups and intercultural dynamics, religion, geography, cuisine, transportation, etc.
- ▶ **Learn at least a few basic phrases in your host community's language.** Learn how people greet each other and practice that greeting. Body language is also important. Be astute and adapt your body language appropriately.
- ▶ **Find out about local taboos and customs by asking people who have traveled before you, by consulting guidebooks etc., and then respect them.**
- ▶ **Dress appropriately.** Respecting the dress code where you are is very important, especially around religious sites.
- ▶ **Be snapshot savvy.** Don't experience your entire trip through the lens of a camera. Ask locals before taking photographs of them or activities they are involved in.
- ▶ **Learn about something you're interested in while you travel.** Do you have a passion or hobby? Find out how people in another culture approach or deal with the same theme.
- ▶ **Get off the beaten path.** Look for events going on that are not mentioned in guidebooks and seek places that are not overcrowded with like-minded tourists. Go where the locals go; however, use your discretion and don't infringe on people's private activities and spaces.
- ▶ **Bring small, thoughtful gifts from home if you know that you are going to be spending time with a local family or in a community.**
- ▶ **Beggars.** In many cities in the world you will encounter both children and adults begging. Generally speaking, giving money to children is not a good idea. Depending on you where you are, the implications for giving to beggars are different. Search the Internet and local travel guides for local rules and recommendations.

### **Economic Considerations**

- ▶ **Buy locally produced products and services.** Don't bargain too much over an extra dollar or two that will go a lot farther for your seller than for you.
- ▶ **Go Local.** Stay in locally owned accommodations, eat at locally owned restaurants, and hire local guides. Usually, smaller equals better. If you decide to go on a guided tour through a tour agency, ask about their sustainability practices (e.g. what do they do with garbage generated, who do they employ, who is the agency owned by?)
- ▶ **Contribute something to the place or community you are visiting, beyond just the money you are spending to get what you want.** Donate some money to a good and relevant cause either before, during, or after your visit. Plan ahead to contribute some time, and volunteer at an organization that you deem worthy. It would be wise to research what organizations exist and contact them to inquire whether they receive volunteers before you leave.
- ▶ **Choose destinations based on their demonstrated commitment to sustainable practices** including their human rights record, environmental conservation record, commitment to peace, etc. Check with **Ethical Traveler** about this ([www.ethicaltraveler.org](http://www.ethicaltraveler.org)).



## APPENDIX E

### EMU GOALS FOR CROSS-CULTURAL LEARNING

#### **Goals for Cross-cultural Learning**

Cross-cultural learning experiences will be structured to build a knowledge base and provide direct experience. Through both modes of learning, students will become more capable of interacting in meaningful ways with people in a cross-cultural context. The following goal statements guide the cross-cultural program:

#### **Cross-cultural Understanding**

An openness to a new way of experiencing the world will be developed through observing and interacting with people whose values, communication patterns, ways of knowing, and world view have been shaped by a different culture. Reflection and discussion of personal responses to cultural similarities and differences will be the focus of learning. Language acquisition, home stays, and a relationship with a host or host family greatly facilitate the development of cross-cultural understanding.

#### **Cultural Self-awareness**

An ability to understand and value one's own culture alongside the culture of another is an important counterpart of cross-cultural learning. Interaction with a different culture creates many opportunities to better comprehend how North American culture has influenced one's personal values, beliefs, and assumptions.

#### **Global Awareness**

Students will look beyond their own culture to understand social systems and institutions from the perspective of people in another culture. A conceptual framework which values the interdependent nature of cultures will be developed for examining the dynamic forces shaping any society -- religious, political, economic, social, artistic, geographic, and historical.

#### **Religious Understanding and Formation**

"All cultures reflect the image of God, and at the same time, all cultures distort the image of God" (Calvin Shenk, professor emeritus at EMU). Cultural awareness is being able discern where true reflections of God's image are found in both the home and host culture. Likewise, the cross-cultural can help one discern religious understandings that are purely cultural and distort portions of God's truth in both the home and host culture. To facilitate this discernment, students will compare how faith and moral values are

incorporated into the daily life of the home and host culture. Particular attention will be given to how the person and teachings of Jesus are made relevant to the social context by the Christian church.

**Integration of Learning into Worldview and Lifestyle**

Students will participate in ongoing activities related to their cross-cultural experiences upon their return to campus. These could include involvement in service-learning programs, reunions, mentoring and orientation of new students going on cross-cultural, participation in selected MCC/EMU activities, continued reading and journaling.

-adapted from "Rationale for Cross-cultural Learning"

adopted by the General Education Curriculum Committee 11/29/93

-updated and approved by Cross-cultural  
Committee 9/04

APPENDIX F

COLLEGE WRITING FOR TRANSITIONS QEP PROMPT

A word (or more) about how long this in-class essay should be: First, in a given classroom, students think and write at different paces. Some students think rapidly but find it difficult to transform those thoughts into words on a page. Some students think slowly but carefully and are efficient at getting those words on a page. Some students write more slowly than others. Some think and write rapidly. Some students write in large handwriting and have a fraction of actual words on the page in comparison to others. Still other students write in quite small letters, and each page includes several ideas and discussion on those ideas.

So, it is not easy to tell you, in a writing session that is timed and where you are using your pen, how long this essay should be. What we can tell you is that it needs to be complete with a beginning, a middle, and an end. The essay requires a thesis and a development of that thesis. First, take some time to think about what you have to say. Then organize your thoughts and list them. What is the main idea in these thoughts? Perhaps this, then, is the beginning of your thesis, and the other ideas will form the topic sentences of subsequent paragraphs that develop the thesis. When you follow the above instructions and work on this the entire class period, you will find that your paper is the appropriate length.

Please read the following paragraphs. Then respond to the prompt that follows.

*Beginning of the environmental movement*

In 1963, when Rachel Carson published her book *Silent Spring*, DDT, an agricultural pesticide, was widely used to conquer pests in our nation's farmland. Carson called for science to take responsibility and for the government to regulate the use of pesticides. She linked the use of pesticides to cancer in humans, claimed that no one was held accountable for irresponsible use of chemicals, and argued that no one understood the long term effects of these chemicals.

Her writing caused an uproar across the United States; however, the timing of her book was such that within a few years, the environmental movement had gathered momentum, regulations were being written and approved, and the public began its long education on environmental awareness. What is an outcome of Rachel Carson's call to action today, here at Eastern Mennonite University?

*EMU in top 20 percent of nation in recycling competition*

EMU placed 28th in the "waste minimization" category out of 510 colleges and universities in a nationwide recycling challenge called "Recyclemania" held during spring semester.

That percentage "is the most comprehensive indicator of how well a school manages its waste, as it inherently includes any reducing and reusing of waste material in addition to recycling," according to Jonathan Lantz-Trissel, recycling and waste reduction coordinator at EMU, who makes his regular rounds of campus, using a custom-built bike and specially-designed trailer to collect recyclables.

*EMU's first LEED-certified building*

Cedarwood is EMU's first building to receive LEED (Leadership in Energy and Environmental Design) certification. An interactive display inside the main lobby highlights the building's green features, sharing information about vendors and products for green building.

"Part of the emphasis of green building is creating a healthful environment for occupants," points out Eldon Kurtz, EMU physical plant director. "This building will be an aesthetically pleasing community place that will have a lesser impact on this corner of creation, and, we hope, inspire others to consider green building options."

*Campus garden provides teaching tools and produce*

An expanding campus garden at EMU provides fresh, organic and local food for the cafeteria while giving students a practical exercise in sustainability. Several EMU courses use the garden as part of the curriculum, and students have been a significant part of the "grass roots" effort to create the garden.

"I'm interested in encouraging students to have a garden of their own once they graduate," said Peter Dula, assistant professor of Bible and culture, "and I'm hoping that working on the garden is cultivating and instilling sustainable habits among students."

These are just three examples of how EMU enacts the slogan "Be green." For more news about EMU's sustainability efforts, see <http://www.emu.edu/news/index/0/begreen>.

Clearly, EMU is taking environmental sustainability seriously with its waste management, new Cedarwood dorm, campus garden, green design and sustainability classes, trayless dining room, Creation Care Council that includes faculty, staff, and students, the QEP (Quality Enhancement Plan) initiative to begin in fall 2010, and its status as a "participating college" in the Au Sable Institute of Environmental Studies. (If you are interested in joining this discussion, email EMU at [begreen@emu.edu](mailto:begreen@emu.edu).)

**Prompt:**

As a first-year student, you have already experienced EMU as a green campus in the dining room and perhaps in your dorm, if you are a resident of Cedarwood. Think about the first time you became conscious of the environment and the need to care for it. Where were you? What were your surroundings? How did you experience this? What did you feel? Were you inspired to act? If so, in what way? If not, why not? Where are you now with this issue? How does it connect with your beliefs about the world? Does it seem important today or is it part of yesterday's news? If it is important, why do you think this is the case? In other words, why are we having this discussion? If you do not believe it is important, what has taken its place? In what way? Importantly, no matter where you are in this discussion, how will you respond to EMU's "green" decisions?

APPENDIX G

QEP QUESTIONNAIRE

Consider the following statements about the relationship between humans and the environment. Please indicate the degree to which you agree with these statements by filling in one of the circles in each row.

	Strongly Agree	Mildly Agree	Unsure	Mildly Disagree	Strongly Disagree
1. We are approaching the limit of the number of people the earth can support.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Humans have the right to modify the natural environment to suit their needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. When humans interfere with nature, it often produces disastrous consequences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Human ingenuity will insure that we do NOT make the earth unlivable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Humans are severely abusing the environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Human actions contributing to environmental degradation are sinful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. The earth has plenty of natural resources if we just learn how to develop them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Plants and animals have as much right as humans to exist.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. The balance of nature is strong enough to cope with the impacts of modern industrial nations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Despite our special abilities, humans are still subject to the laws of nature.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. The so-called "ecological crisis" facing humankind has been greatly exaggerated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. A person can be completely devoted to following Jesus without actively taking care of the environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. The earth is like a spaceship with very limited room and resources.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Humans were meant to rule over the rest of nature.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. The balance of nature is very delicate and easily upset.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Humans will eventually learn enough about how nature works to be able to control it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. If things continue on their present course, we will soon experience a major ecological catastrophe.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Caring for the environment is an important part of being a Christian.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. What is your definition of "environmental sustainability"?

20. List three things individuals can do to promote environmental sustainability.

APPENDIX H

QEP RUBRIC FOR COLLEGE WRITING FOR TRANSITIONS RESEARCH PAPER –  
DRAFT

<u>Criteria</u>	<b>A excellent</b>	<b>B good</b>	<b>C minimal expectations</b>	<b>D to F below expectations; may be unacceptable</b>	<u>Comments</u>
<p><b>1a. Content</b> Explain how individual, institutional, and community actions impact the environment. <i>(quality of the information/ideas and sources/details used to support them)</i></p>	<ul style="list-style-type: none"> <li>- includes explanations of actions that impact the environment, with depth of content</li> <li>- applies critical insight and represents original thinking</li> <li>- demonstrates high quality and breadth of resources</li> </ul>	<ul style="list-style-type: none"> <li>- includes explanations of actions that impact the environment, with depth of content</li> <li>- applies insight and represents original thinking</li> <li>- demonstrates quality resources</li> </ul>	<ul style="list-style-type: none"> <li>- includes explanations of actions but lacks depth of content and may depend on generalities or the commonplace</li> <li>- represents little original thinking</li> <li>- uses mostly quality resources</li> </ul>	<ul style="list-style-type: none"> <li>- lacks explanations of actions or is superficial in content</li> <li>- lacks original thinking</li> <li>- uses resources of poor quality</li> <li>- includes factual or logical errors</li> </ul>	
<p><b>1b. Content</b> Name and defend actions that promote environmental sustainability at the individual, institutional, and community levels. <i>(quality of the information/ideas and sources/details used to support them)</i></p>	<ul style="list-style-type: none"> <li>- names actions that promote sustainability</li> <li>- defends those actions with strong and compelling arguments and depth of content</li> <li>- applies critical insight and represents original thinking</li> <li>- demonstrates high quality and breadth of resources</li> </ul>	<ul style="list-style-type: none"> <li>- names actions that promote sustainability</li> <li>- defends those actions with strong arguments and depth of content</li> <li>- applies insight and represents original thinking</li> <li>- demonstrates quality resources</li> </ul>	<ul style="list-style-type: none"> <li>- names actions that promote sustainability</li> <li>- defends actions with adequate arguments and some depth of content; may depend on generalities or the commonplace</li> <li>- represents little original thinking</li> <li>- uses mostly quality resources</li> </ul>	<ul style="list-style-type: none"> <li>- lacks actions or named actions do not promote sustainability</li> <li>- does not defend actions or arguments are superficial in content</li> <li>- lacks original thinking</li> <li>- uses resources of poor quality</li> <li>- includes factual or logical errors</li> </ul>	
<p><b>2. Structure</b> <i>(logical order or sequence of the writing)</i></p>	<ul style="list-style-type: none"> <li>- is coherent and logically developed</li> <li>-uses very effective transitions</li> </ul>	<ul style="list-style-type: none"> <li>-is coherent and logically developed</li> <li>-uses smooth transitions</li> </ul>	<ul style="list-style-type: none"> <li>-is coherent and logically (but not fully) developed</li> <li>-uses some awkward transitions</li> </ul>	<ul style="list-style-type: none"> <li>-uses inadequate, irrelevant or illogical development and transitions</li> </ul>	
<p><b>3. Style</b> <i>(appropriate attention to audience: effective word choice, sentence variety, voice; appropriate</i></p>	<ul style="list-style-type: none"> <li>- is concise, eloquent, and rhetorically effective</li> <li>- composes varied sentence structure</li> </ul>	<ul style="list-style-type: none"> <li>- displays concern for careful expression</li> <li>- composes some varied sentence</li> </ul>	<ul style="list-style-type: none"> <li>- displays some personality <u>but</u> lacks imagination and may be stilted</li> <li>- composes little varied sentence structure</li> </ul>	<ul style="list-style-type: none"> <li>- is simplistic</li> <li>- composes ineffective sentence style</li> <li>- applies limited vocabulary with jargon and clichés</li> <li>- is clearly below</li> </ul>	

<i>level of formality for academic writing vs. informal text messages and email)</i>		structure	- frequently uses jargon and clichés	expectations for college students	
<b>4. Conventions</b> <i>(adherence to grammar rules: usage, mechanics)</i>	<ul style="list-style-type: none"> <li>- composes well-constructed sentences</li> <li>- makes virtually no errors in grammar and spelling</li> <li>- makes accurate word choices</li> </ul>	<ul style="list-style-type: none"> <li>- almost always composes well-constructed sentences</li> <li>- makes minimal errors in grammar and spelling</li> <li>- makes accurate word choices</li> </ul>	<ul style="list-style-type: none"> <li>- usually composes well-constructed sentences</li> <li>- makes several errors</li> <li>- makes word choices that distract the reader</li> </ul>	<ul style="list-style-type: none"> <li>- does not compose well-constructed sentences</li> <li>- confuses readers with many errors</li> <li>- makes frequent inappropriate word choices</li> </ul>	
<b>5. Source Integrity</b> <i>(appropriate acknowledgment of sources used in research)</i>	<ul style="list-style-type: none"> <li>- cites sources for all quotations</li> <li>- credible paraphrases, cited correctly</li> <li>- includes reference page</li> <li>- makes virtually no errors in documentation style</li> </ul>	<ul style="list-style-type: none"> <li>- cites sources for all quotations</li> <li>- credible paraphrases, usually cited correctly</li> <li>- includes reference page</li> <li>- makes minimal errors in documentation style</li> </ul>	<ul style="list-style-type: none"> <li>- cites sources for all quotations</li> <li>- mostly credible paraphrases, sometimes cited correctly</li> <li>- includes reference page</li> <li>- makes several errors in documentation style</li> </ul>	<ul style="list-style-type: none"> <li>- does not cite sources for all quotations</li> <li>- less than credible paraphrases, often not cited correctly</li> <li>- little to no evidence of source usage</li> <li>- may not include a reference page or is very weak</li> <li>- makes many errors in documentation style</li> </ul>	
<p>The weighting of each of the five areas is dependent on the specific written assignment and the teacher's preference. Plagiarism occurs when a person presents as one's own "someone else's language, ideas, or other original (not common-knowledge) material without acknowledging its source" (adapted from Council of Writing Program Administrators).</p>					<b><u>Grade</u></b>

APPENDIX I

QEP CROSS-CULTURAL ASSIGNMENTS

**1) Identify and explore a sustainability issue in the host community and explore how the response to this issue is reflective of the broader host culture (*learning outcomes 2 and 3*).**

*"Sustainability covers a wide array of fields. Sustainability topics would include anything that looks at ways of reducing the human impact on the global environment. Students are encouraged to work with themes with which they are already familiar in order to have a basis for comparison and a knowledge base from which to work. Examples may include:*

- What is the average home size in the country/community where you are? How are homes constructed? How does it compare to US home sizes and what are the implications for sustainability?
- Are there particular communities or organizations that are on sustainability initiatives? What do those initiatives look like and what can we learn from them?
- Is there a consciousness of the need for energy conservation? How is this manifested and what could be done to change it?
- What do the people in the country where you are studying eat and where does their food come? How does that compare to the US and what can be learned in terms of sustainability?
- What does the health care system look like? Is there a traditional medicinal practice still in use? How does that practice depend on the natural environment and its conservation?
- How are people in the country where you are studying generating power? How does that compare to the US and what can be learned in terms of sustainability?
- How are media such as film, newspaper, theater, and/or music being used to educate about sustainability or the need for resource protection and conservation? How does that compare to the US?
- What kinds of transportation do people use and how do they use it? How does that compare to the US and what can be learned in terms of sustainability?
- What is the family structure like? How do families work together to consolidate resource use? How does that compare to the US and what can be learned in terms of sustainability?
- What are innovative technologies that are being used in order to reduce energy consumption? How does that compare to the US and what can be learned in terms of sustainability?
- Are children being educated about the need to be conscious of the earth's carrying capacity and their role in caring for the earth? How does that compare to the US and what can be learned in terms of sustainability?
- How are local businesses taking leadership in their community to educate about



the need for sustainably produced products? How does that compare to the US?

- What is the role of poverty, equality and justice in our ability to reach a sustainable global lifestyle? What do you see around you that can inform you of this?"

*Adapted from the Green Passport Global Footprint Grant, <http://greenpassport.ning.com/page/green-passports-global>*

**2) Explore the Impact of Traveling Abroad (*learning outcome 2*):**

Students will learn how to evaluate the impact of their group's travel during their cross-cultural experience. This may be delivered through a variety of methods, including an orientation workshop led by a QEP implementation team member utilizing ecological footprint comparisons, carbon offsetting calculations, or discussion of relevant assigned readings. Leaders may also choose to focus on impact while in the host country by requiring students to log and evaluate resource use or research topics specifically related to economic, socio-cultural, or ecological effects of tourism.

**3) (Optional) Participate in Cross-Cultural Presentation event in which each group from the past year reports on environmental sustainability learning (*learning outcome 2, 3, and 5*).**

## APPENDIX J

## RUBRIC FOR ACADEMIC MAJOR ASSESSMENT – DRAFT

Learning Outcome 4: Integrate the principles of environmental sustainability within the student's discipline.

<b>Criteria</b>	<b>Exceeds expectations 3</b>	<b>Meets expectations 2</b>	<b>Does not meet expectations 1</b>	<b>Score</b>
Identification of an environmental sustainability issue within the discipline	Identifies an appropriate issue; provides an accurate, clear, and complete description, including works cited; presents the issue in a creative, significant, and/or concise way.	Identifies an appropriate issue; provides an adequate description, including works cited.	Does not identify an appropriate issue or description is incomplete and/or inaccurate; or omits citations.	
Analysis of the issue	Issue is thoroughly and fairly analyzed and the analysis is particularly insightful and/or creative.	Issue is adequately and fairly analyzed.	Issue is not analyzed or analysis is incomplete, superficial, and/or biased.	
Presentation of solution or sustainable course of action	A particularly creative or innovative solution or course of action is presented and the solution/course of action is applicable to the issue.	A solution or course of action is presented and the solution/course of action is applicable to the issue.	A solution or course of action is not presented or the solution/course of action is incongruent with the issue.	
Conclusion (projected impact of solution or course of action)	Conclusion is logical, persuasive, concise, and unique.	Conclusion is logical and persuasive.	Conclusion is not provided or conclusion is illogical.	
<b>Total Score:</b>				

APPENDIX K

KEY QUESTIONS FOR THE REAFFIRMATION COMMITTEE

1. Is the budget for library and curricular resources realistic?
2. We want this to be a stimulating and rewarding academic experience for our faculty, especially for those who currently have little interest or expertise in environmental sustainability. How can we accomplish this? How can we best implement our project without adding to already heavy faculty workloads?
3. We have anecdotal evidence that there may be some resistance from students – perhaps related to “subject fatigue.” How do we engage students without turning them off?
4. Are you aware of other direct measures that align with our learning outcomes? We would be particularly interested in short, objectively scored scales or tests.