Faculty and Student Research as a Catalyst for Civic Engagement

Keweenaw Bay Ojibwa Community College
Overview

- Introduction to Keweenaw Bay Ojibwa Community College (KBOCC)
- Why does KBOCC conduct research?
- How does KBOCC conduct research?
- Discussion
A Tribal Community College chartered by the Keweenaw Bay Indian Community
Our Vision

Keweenaw Bay Ojibwa Community College will serve as the principal higher educational institution for the L’Anse Indian Reservation and surrounding communities by providing quality academic programs rich in Ojibwa culture that empower students to fulfill their dreams of a superior education.
Community Characteristics

- Rugged, forested terrain
- Baraga County: 1,069 sq. mi, 8,503 people
- 14%-20% American Indian/Alaskan Native
- Median household income - $39,803
- Poverty - 17.8%
- High School graduates - 82.4%
- College graduates (bachelor’s level) - 13.1%
KBOCC Characteristics

• Enrolls around 100 students per semester
• 85 degree-seeking students in 2015-2016
• Offers associate’s degrees in Anishinaabe Studies, Business Administration, Early Childhood Education, Environmental Science, and Liberal Studies
• Offers certificates in Business Administration, Environmental Science, and Corrections
Why Does this College Take on Research Projects?

Research is mission-driven

• Identity - Advancing scholarship from an Anishinaabe perspective
• Service to our community
• Teaching and learning
Tribal Colleges Are an Expression of Sovereignty for Tribal Communities

Through their colleges, tribal communities can, in addition to managing their own post-secondary educational programs:

• Authorize or deny research proposals based on their own expert review
• Set research agendas
• Interpret data
• Present findings
Tribal Colleges Help Indigenize the Research Endeavor

• Facilitating Tribes and individuals in telling their own stories their own way
• Making research processes respectful and trustworthy
• Making research findings trustworthy to Tribal communities
• Investigating topics of interest to indigenous people and communities
Research in service to the community

As the primary educational institution of the Keweenaw Bay Indian Community, KBOCC conducts research to meet community needs.

• History
• Education
• Community Health
• Environmental Science
Teaching and Learning Needs Call for Research Activity

Our students thrive best when they can learn by doing in a context that benefits their community. Doing research teaches

• Information literacy and critical thinking
• Information ethics
• Civic Engagement
Student Research Provides Learning Experiences and Assessment Opportunities
How Does KBOCC Conduct Research?

- Curriculum embedded research ethics and civic engagement
- Student participation in faculty-led research
- Capstone projects
Curriculum Embedded Research Ethics and Civic Engagement

• General education outcomes
• Course level activities
Curriculum Embedded Research Ethics and Civic Engagement

General Education Outcomes

Outcome #5:
INTEGRATE AN INDIVIDUAL INTEREST WITH CIVIC RESPONSIBILITY.

• Volunteer
• Engage in community change
• Participate in government
• Discuss civic affairs
Curriculum Embedded Research Ethics and Civic Engagement

Course Level Activities

- Information Ethics
- College Composition 2 Projects
- Early Childhood Projects
- Increased Quantitative Research in Environmental Science
Student Participation in College or Faculty Research Projects

Diabetes Education in Tribal Schools was an early example. Students participated as research assistants, and as creators of illustrations and materials.
The Abinoojiinh Waakaa’igan project
Behavioral Health Research

• Survey of students’ perceptions of behavioral health problems and available resources
• Effectiveness study of interventions chosen based on survey results
• Students administer surveys, participate in planning and presentations
Climate change perspectives and policy support in the Keweenaw Bay Indian Community

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Keweenaw Bay Ojibwa Community College

Abstract
Michigan's Keweenaw Bay Indian Community (KBIC) recently passed a resolution for long-term planning strategies to prepare for ecological, economic, and cultural impacts of climate change. This poster summarizes timely, mixed-methods research on tribal members' climate change perspectives and support for long-term policy actions. Through 30 semi-structured interviews and 189 mail survey responses, we found that members are acutely aware of climate change, are particularly concerned about water resources, and recognize the importance of culture in planning initiatives, and support mitigation and adaptation measures.

Introduction
There is overwhelming agreement in the scientific literature that global climate change is happening, and that indigenous communities of the world are being disproportionately affected (Cordellis & Suagee, 2008; IPCC, 2014; Lynch et al., 2011; Malinowski et al., 2013). While there are many impacts focused on Arctic, Pacific northwest, and southwestern tribes, those from the Great Lakes region have been largely overlooked so far. Environmental changes already noted in this area include reduced snowpack and ice cover, altered timing of seasonal events, invasion of non-native species, and changes in the frequency and intensity of precipitation events (Mellilo et al., 2014; Pryor et al., 2014).

Our research was conducted to introduce Ojibwa Anishinaabe voices to broader discussions on climate change and to provide guidance for the recently passed KBIC climate change adaptation resolution. Our specific research objectives were:

- Describe perceptions of climate change among enrolled adult KBIC members
- Gain insight on how climate change could impact lifeways of the KBIC
- Assess support for specific long-term mitigation and adaptation strategies

Methods
In 2013 we conducted semi-structured interviews with 30 randomly-selected KBIC members (systematic random sample; response rate = 40%). Interviews were digitally recorded, transcribed verbatim, and coded. Key themes were identified. Our sample contained 16 males and 14 females, ranging in age from 18 to 78, with 10 identifying themselves as elders.

In 2015 we conducted a quantitative mail survey, again using a systematic random sample of KBIC members. We received 199 completed surveys from the 361 sent (response rate = 55%). Most survey items were structured using 5-point Likert scales (1 = strongly agree to 5 = strongly disagree). We used SPSS 22.0 for analyses.

Upper Peninsula of Michigan

The KBIC is on the southern shore of Lake Superior at the base of the Keweenaw Peninsula (left). Many sacred plant species such as wild rice and northern white cedar (right) are very sensitive to environmental changes.

Results

Theme 1: Lifeways are intertwined with the environment, and environmental concern is very high. Concern for the region's water resources was particularly high, as identified by 23 of 30 interviewees.

- I am most concerned about the Lake Superior fisheries, our rivers, our wild rice, and being able to keep doing all of our sacred cultural activities related to water. (Interviewee #2)

As shown by the table below, survey respondents reported very strong concerns for a wide range of potential climate change impacts:

<table>
<thead>
<tr>
<th>Concern</th>
<th>Moderate</th>
<th>Strong</th>
<th>Very Strong</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water levels</td>
<td>4.7</td>
<td>3.6</td>
<td>2.4</td>
</tr>
<tr>
<td>Precipitation</td>
<td>4.6</td>
<td>4.4</td>
<td>3.9</td>
</tr>
<tr>
<td>Storms</td>
<td>4.6</td>
<td>4.4</td>
<td>3.9</td>
</tr>
<tr>
<td>Temperature</td>
<td>4.6</td>
<td>4.4</td>
<td>3.9</td>
</tr>
<tr>
<td>Ice cover</td>
<td>4.6</td>
<td>4.4</td>
<td>3.9</td>
</tr>
<tr>
<td>Native plants</td>
<td>4.6</td>
<td>4.4</td>
<td>3.9</td>
</tr>
<tr>
<td>Arable areas</td>
<td>4.6</td>
<td>4.4</td>
<td>3.9</td>
</tr>
<tr>
<td>Forests</td>
<td>4.6</td>
<td>4.4</td>
<td>3.9</td>
</tr>
<tr>
<td>Crop yields</td>
<td>4.6</td>
<td>4.4</td>
<td>3.9</td>
</tr>
</tbody>
</table>

Survey respondents agreed on several climate change impacts. Over 88% strongly support an emphasis on Ojibwa values in climate change planning. Over 82% strongly support the creation of a group of KBIC specialists to advise the Tribal Council in planning. 90% support pricing the survival of sacred plant and animal species in planning, and 96% agree that the tribe needs to focus on ensuring a healthy environment for future generations.

Theme 2: Climate change is happening and could be a major problem. 29 of 30 interviewees believe climate change is happening, and 26 gave detailed accounts of environmental changes they’ve noticed during their lifetimes.

- The length of the seasons seem different now. I remember winter being much longer, with much more snow. I don’t seem to notice anymore. And the warming is so obvious. Recent years have been really warm. As a kid we couldn’t swim in the lake until August, but now by June the water’s warm enough. (Interviewee #7)

Survey respondents expressed similar views. 90% believe climate change is happening and 92% believe changes are related to water. 95% support taking measures to address climate change in long-term planning. The table below shows the near-equal support for various adaptation and mitigation strategies:

<table>
<thead>
<tr>
<th>Adaptation measures</th>
<th>16%</th>
<th>24%</th>
<th>32%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on ways to adapt to climate change</td>
<td>24%</td>
<td>32%</td>
<td>40%</td>
</tr>
<tr>
<td>Focus on ways to mitigate climate change</td>
<td>24%</td>
<td>32%</td>
<td>40%</td>
</tr>
<tr>
<td>Manage resources for environmental change</td>
<td>24%</td>
<td>32%</td>
<td>40%</td>
</tr>
<tr>
<td>Prepare for future human health impacts</td>
<td>24%</td>
<td>32%</td>
<td>40%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mitigation measures</th>
<th>16%</th>
<th>24%</th>
<th>32%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on ways to reduce human influence on climate change</td>
<td>24%</td>
<td>32%</td>
<td>40%</td>
</tr>
<tr>
<td>Focus on ways to reduce natural human influence on climate change</td>
<td>24%</td>
<td>32%</td>
<td>40%</td>
</tr>
<tr>
<td>Increase renewable energy</td>
<td>24%</td>
<td>32%</td>
<td>40%</td>
</tr>
<tr>
<td>Increase energy efficiency</td>
<td>24%</td>
<td>32%</td>
<td>40%</td>
</tr>
<tr>
<td>Increase energy efficiency for KBIC members</td>
<td>24%</td>
<td>32%</td>
<td>40%</td>
</tr>
</tbody>
</table>

Discussion
Our findings from semi-structured interviews and a quantitative mail survey demonstrate that climate change is a major concern among KBIC members and that support for adaptation is very high. Participants were very engaged and passionate about these issues, demonstrating their commitment to preserving their culture and natural resources.

This research adds to the limited scientific literature on climate change and Native American communities, particularly those from the Great Lakes region. Our work highlights the need for continued research and engagement with the community to ensure effective strategies are developed and implemented.

Acknowledgments
This research was made possible by funding from the United States Geological Survey (USGS), the National Science Foundation (NSF), and the National Park Service (NPS). We would like to thank the Keweenaw Bay Indian Community for their support and collaboration.

References
EPA Tribal Eco-Ambassadors
Eco-Ambassadors Stream Monitoring

- Monitoring water temperatures in trout and walleye habitats
- Baseline data for long-term studies of culturally significant species
- Ten student participants, six students have presented their work in conference settings
Weaving Our History: Voices of Wisdom and Memory

The history of a people, specifically the Keweenaw Bay Indian Community, should be told by the people. Many voices should be included.

Introduction: Weaving Our History: Voices of Wisdom and Memory. Oral history Project is an effort to gather first person oral history narratives from the late twentieth and early twenty-first centuries to develop and document resources for the purposes of:

- protecting, preserving, and encouraging history, culture, tradition, and heritage
- developing resource papers for teaching in college courses across the curriculum, most importantly History of the Keweenaw Bay Indian Community and History of Michigan Tribes
- developing teaching materials for K-12 education
- supporting academic research by qualified scholars for educational purposes

The project proposal received funding from the National Endowment for the Humanities through a highly competitive selection process. Also, Weaving Our History: Voices of Wisdom and Memory was awarded the prestigious designation of a We the People project passing these living memories and wisdom on to future generations.

Methods: The project began with capacity-building through a professional workshop led by Dr. Carol MacLennan, Michigan Technological University. Ten local educators participated. Capacity building continued with individual and small-group training of student aides, and oral history methods class for undergraduates. The professional workshop also served as a community participatory coordinating group for developing topics, focus, forms, and protocols. Workshop participants were able to conduct and transcribe interviews and train student interviewers. Interviewing began in 2012 and is on-going. Narrators are recruited based on knowledge of significant events and developments in recent tribal history and include both tribal and non-tribal community members. Narrators receive spoken orientation and written information about the project to ensure informed consent to be interviewed and audio-recorded. Recordings and transcripts are only included in the archival collection when formally donated by the narrators. Donated transcripts will be archived at the College and used as sources material for developing teaching materials, starting in summer 2014. Audio and video recordings of current events of potential historic significance have been made to be included in the archive.

Preliminary Conclusions: Oral history methods provide rich, multifaceted information particularly on what contemporary observers thought and felt about events. What the narrators have to say may challenge preconceptions and twenty-first century hindsight. Key insights for novice researchers concern the time needed for planning and preparation, especially in a community participatory model, the dedicated-time needed by interviewers, and the necessity of contingency planning. Project team members are defining and practicing culturally appropriate interviewing techniques that integrate narrative into traditional activities in a familiar and natural way, while maintaining ethical and respectful conduct.

Results: As of summer 2014, all three types of capacity building activities have been conducted. The undergraduate course has been documented for future offerings and individual and small-group training can be conducted as needed. The professional workshop group developed a guide for local history research and began a document collection. The protocols, community information documents, informed consent forms and donation forms can serve as models for future projects. Approximately fifteen to eighteen full-length interviews have been conducted, with interviews by six narrators completely transcribed and donated. In addition, the Tribal Historical Preservation Office will allow the team access to two collections of earlier, mostly unprocessed, intierview recordings. Listening to samples indicated potentially valuable content. Examples of recorded events include the inaugural Tribal Mining Forum, pow-wows, graduations, the college’s accreditation celebration, and a mining workshop. Team members conducted oral history workshops for Converting Great Lakes Culture Keepers in April 2014, and will be giving presentations at the Tribal College Librarians’ Institute and the Oral History Association Conference.

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May 2014

Keweenaw Bay Community College
EERO/Chesnutt, Keweenaw Bay Community College, Baraga • April 2012. Courtesy of Valerie O’Connor.
Keweenaw Bay Community College, Baraga • April 2014. EERO/Photo.
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Keweenaw Bay Community College, Baraga • April 2014. EERO/Photo.
Capstone Projects

- Business Administration
- Environmental Science
- Early Childhood Education
- Liberal Studies
This project is a business plan for an environmental consulting firm.

The mission statement is to provide habitat improvement consultation for long-term benefits to the landowner, wildlife and the environment.
Lake characteristics that affect biomagnification of mercury in Michigan’s Upper Peninsula

This project examines characteristics that influence the bioaccumulation of mercury in lake food webs.
Early Childhood Education

A Feasibility Study on Preschool Behavior

Aggressive behavioral issues in a preschool setting are a significant concern to teachers.

The goal of this study is to provide a set of recommendations for preschool teachers.
Building a Seed Library in Baraga County

This project explores the process of starting a garden seed library and the seed that will be housed in it, the current status of the seed library, and it will explore the future community involvement in the seed library.

Liberal Studies

Capstone Projects
Faculty and Student Research as a Catalyst for Civic Engagement

Conclusion

• Why Does KBOCC Conduct research?

• How Does KBOCC Conduct research?
Moving forward with Curriculum

- Streamlining the IRB process for students
- Centralizing on-line student surveys
- Monitoring effects of the quantitative reasoning math sequence
- Implementation of Observation and Assessment course in Early Childhood Education
The Future for Research Projects

• Improving IRB processes
• Adding transparency and access by web-publishing
• Behavioral health intervention study
• Continuation of oral history project
• Collaboration with Salish Kootenai College
• Proposal for a study of arsenic in well water
Discussion

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