

# Rock Research Expo

Fall 2010

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- Research Projects and Grant Acquisition (title, authors, brief introduction),
- Recent conference presentations of faculty members and students,
- Announcement of grant opportunities,
- Announcement of visiting scholars on campus and a short biography for each scholar,
- Announcement of research related activities on campus.

## WELCOME

### Aims

Rock Research Expo is published online twice yearly, in spring and fall. Rock Research Expo (RRE) serves as a newsletter that keeps our campus informed of the exciting accomplishments, scholarly endeavors and potential research opportunities for both faculty members and students. Specifically, Rock Research Expo aims to:

- Introduce new knowledge of different disciplines to campus students,
- Provoke students' interests and curiosity in knowledge exploration,
- Promote long term academic communication and collaboration on campus, and most importantly,
- Develop a success-driven environment of learning for both professors and students.

### Scope

- Recent publications of faculty members and students on campus (title, authors, and short abstract),

### Policies

- Information submitted should be an in-depth elaboration in layman's terms to excite the readers,
- Anyone on campus can submit their information online or by email. Student submissions need to have a supporting letter or email from a faculty member,
- The basic submission standards for the newsletter will be that the submitted material be legible, pertinent, and appropriate to present to the campus community,
- Authors are responsible for the accuracy of their submissions. Newsletter editors and SRU will NOT be responsible for the verification of the submitted information.

### Editorial Board

Dr. Jeffrey Forrest, Department of Mathematics  
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 Mr. Philip Tramdack, Bailey Library  
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## FEATURE STORY

### Music Therapy Research

The music therapy program at Slippery Rock University has been active in various forms of research this year, including both qualitative and quantitative inquiry. Students taking an upper-level music therapy course, Psychology of Music, developed research proposals, IRB applications, and study designs as part of this course. Many of the students also conducted these studies and/or presented their findings at the 2010 Symposium for Student Research. These students included Allison Crumling, Jami Kleinert, and Corinne Woolley. Students taking Psychology of Music simultaneously learned about forms of research while also conducting faculty-supervised and IRB-approved research as a means for experiential learning. The research designs created during this course included ethnographic research on the culture of Haiti, descriptive research on adults with autism, musical preparation of students, the use of music during leisure-time, and the preparation of music educators for working with diverse learners (i.e., children with special needs). Some music therapy students were interested in developing quantitative research designs to determine the efficacy and evidence-base for music therapy with a variety of clinical populations. Since these designs would take more than a semester to implement, the students conducted extensive literature reviews on their topic of interest and developed a double-blind research design that they hope to be able to implement during their 6-month internship in music therapy and/or once they graduate.

The music therapy faculty, Dr. Susan Hadley and Ms. Nicole Hahna, have been working collaboratively with two music therapy students,

Vern Miller and Michelle Bonaventura, on a grant-funded research project examining the use



of technology in music therapy practice. This research project is examining how music therapists in the field are currently using

music technology by replicating a study previously conducted by Dr. Wendy Magee. Additionally, the faculty and students collaborating for this study are exploring the use of technology in music therapy with the hopes of creating a handbook that can assist students and music therapists that are working with persons with various developmental disabilities.

In response to the recent earthquake in Haiti, Cayla Catino decided to conduct a qualitative research project on the music and culture of Haiti. In conducting her literature review, she found that



people from Haiti have used the arts as a means for coping with oppression and trauma for centuries. She decided to create an ethnographic-based performance to showcase the art, music, dance, and poetry of Haiti as well as a means for raising awareness for the needs of Haitian people as a result of the earthquake. This Benefit Concert, The HeARTbeat of Haiti, raised over \$500 and

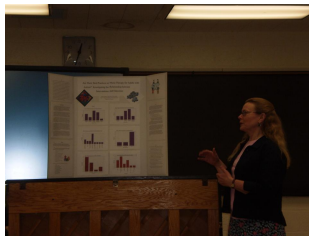


involved collaborations from the art, dance, and music departments.

Allison Crumling, a senior music therapy major, decided to study the use of leisure time for

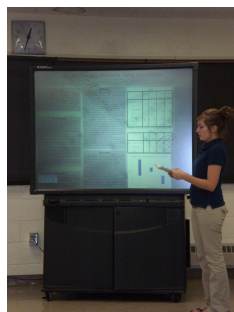
music majors and non-music majors. She was specifically interested in how music majors, as compared to non-music majors, used their leisure time. She conducted a survey, using a randomized convenience sample ( $N = 58$ ) of SRU students, and found differences in both how music majors and non-music majors used recreational music and the duration of time each of the subgroups listened to music during their leisure time.

Mary Feagin, a post-bachelorette music therapy student, conducted a study on music therapists' use of MT interventions for adults with autism. She surveyed board certified music therapists ( $N = 44$ ) that worked with adult clients diagnosed with autism to determine effective music therapy



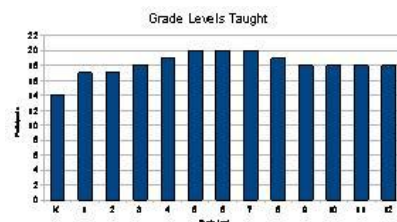
interventions based upon the participants' responses. A majority of participants reported that improvisation was an effective intervention, followed by movement-to-music. The participants in her study reported the following outcomes as a result of music therapy: less agitation; greater expressive language skills; and more appropriate interactions with others.

Angela Junker, a senior music therapy student, conducted a survey to determine the familiarity SRU's music therapy students had with repertoire used by area music therapists employed at UPMC. Using a convenience sample of 24 participants, Angela found that 92% of the participants were familiar with songs such as "Twinkle, Twinkle, Little Star", "If You're Happy



and You Know It", and "Old MacDonald." None of the participants, however, were familiar with songs such as "Ship in the Harbor," "End of the Line," "True Religion," or "I Couldn't Sleep a Wink Last Night." The findings of her study have assisted the music therapy faculty and students in better preparing students, in terms of repertoire, for their clinical placements and internships.

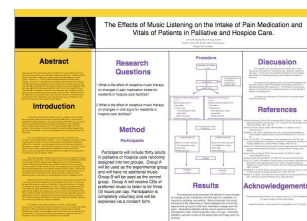
Jami Kleinert, a music education student, conducted descriptive research on music educators' preparedness for working with diverse learners and presented her research at the 2010 Symposium for Student Research. Her survey of



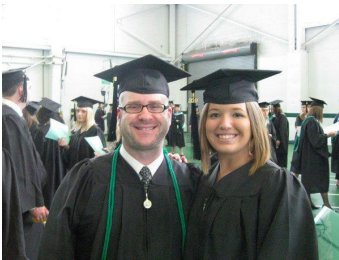
music educators, using Survey Monkey, found that

all of the participants she contacted had worked with or were currently working with diverse learners. Forty-four percent of the participants reported that they found their coursework to be "somewhat effective" in preparing them for working with diverse learners and 67% of participants reported that the coursework they took did not prepare them for working with IEP teams/plans. Jami concluded that the current coursework music educators she surveyed take did not fully prepare them for working intensely with diverse learners and for collaborating with IEP teams. She recommended additional in-class experience to better prepare music educators.

Another SRU MT student who presented at the 2010 Symposium on Student Research was



Corinne Woolley. Corinne presented on a quantitative study design she developed with Dr. Shuttleworth, the former Director of Music Therapy. She developed a study designed to measure the efficacy of receptive music therapy interventions on ameliorating pain, reducing the intake of pain medications, and stabilizing vital signs for hospice patients. As this was an in-depth proposal, Corinne did not conduct the study but hopes to do so during her internship and/or while working as a music therapist in the field.



Vern Miller, pictured left with Corinne Wooley, is active in music therapy research. He graduated from

the SRU MT Program in August 2010, and presented on research during his time at SRU. Vern's most recent presentation was called "Practical applications of computer and MIDI technologies for people with physical and cognitive disabilities" at the Mid-Atlantic Regional Chapter of the American Music Therapy Association Conference. His presentation demonstrated how to incorporate various computer and MIDI technologies in music therapy sessions. Practical examples from sessions with an Individual with Rett's Syndrome were referenced. Participants received information on the equipment needed, as well as the typical costs, to use this technology.

In addition to his presentation last semester, Vern is also presenting at Passages in November on the music therapy work he did as an intern at Children's Hospital of Pittsburgh.

This presentation documents how a music therapy intern was given the opportunity to share 6 music therapy sessions with an adolescent girl

living with cancer. The sessions took place at Children's Hospital of Pittsburgh. This presentation demonstrates how a music-centered approach was used in these sessions. Through musical interactions the patient and therapist were able to communicate thoughts and feelings. The patient was able to express and confront thoughts about her illness to the therapist and her mother through songs and conversations. The patient was also able to enjoy relief from the stress and worries of her hospital stay during her therapy sessions. An explanation of the thought process of the therapist as well as video examples of sessions will be shared.

### Music Therapy Faculty Research, Publications, & Presentations



The music therapy faculty have also been busy publishing and presenting on their research. Dr. Hadley has finished editing the latest

Qualitative Inquiries in Music Therapy series. The most recent volume of Qualitative Inquiries in Music Therapy included two studies using modified grounded theory analyses: the first examining focus group interviews conducted with grieving adolescents receiving music therapy in a school setting; and the second exploring the experiences of music therapists working with adults experiencing pain. The third study utilizes a phenomenologically informed naturalistic inquiry to examine the clinical-musical responses of Nordoff-Robbins music therapists while improvising with clients in order to examine what was going on in the therapist's consciousness moment-to-moment. The final two studies in this volume also utilize naturalistic inquiry as the methodological approach: the penultimate examining the relationship between lyrics and music in

improvised songs that were created in the context of Nordoff-Robbins music therapy sessions with a woman who sought out music therapy as a result of being diagnosed with non-Hodgkin's lymphoma; the last exploring the first Nordoff-Robbins music therapy sessions that were provided for a parent-child dyad in which the parent was an active participant.

Hadley, S. (Ed.). (2010). *Qualitative Inquiries in Music Therapy: A Monograph Series, Vol. 5*. Gilsum, NH: Barcelona Publishers.

In addition to this publication, Dr. Hadley has been presenting with her colleague Nicole Hahna on disability studies, critical race theory, feminist theory, and critical pedagogy in terms of their implications for music therapy education and clinical practice. They presented once in the spring and will be presenting twice this fall for this 5-hour continuing education session.

Hadley, S., & Hahna, N. D. (2010, November 18). *Unveiling sites of privilege: Expanding the therapist's self-awareness*. Conference Presentation (5-hour CMTE) at the American Music Therapy Association Conference, Cleveland, OH.

Hadley, S., & Hahna, N. D. (2010, November 12). *Unveiling sites of privilege: Expanding the therapist's self-awareness*. Conference Presentation (6-hour continuing education training) at the Expressive Therapies Summit, Times Square, New York.

Hadley, S., & Hahna, N. D. (2010, March 25). *Unveiling sites of privilege: Expanding the therapist's self-awareness*. Conference Presentation (5-hour CMTE) at the Mid-Atlantic Regional Chapter of the American Music Therapy Association Conference, Pittsburgh, PA.



Nicole Hahna has also been presenting on her own research. In spring 2010, she and her colleague presented on the use of feminist pedagogy in music therapy education at the MAR-AMTA Conference. This study surveyed 188 music therapy educators regarding their views and use of feminist pedagogy and feminist music therapy. The purpose of this study was two-fold: (a) to determine how many music therapy educators used feminist pedagogy and (b) to determine if there was a relationship between the use of feminist pedagogy and academic rank of the participants. Seventy-two participants responded to this study, with 69 participants included for data analysis. Stake and Hoffman's (2000) feminist pedagogy survey was adapted for this study, examining four subscales of feminist pedagogy: (a) participatory learning, (b) validation of personal experience/development of confidence, (c) political/social activism, and (d) critical thinking/open-mindedness. The results revealed that 46% ( $n = 32$ ) of participants identified as feminist music therapists and 67% ( $n = 46$ ) of participants identified as using feminist pedagogy.

Results of a mixed ANOVA revealed a statistically significant difference within the four survey subscales ( $p < .0001$ ), no significant difference ( $p = .32$ ) for academic rank, and no significant interaction ( $p = .08$ ) of academic rank the four survey subscales. A Tukey post hoc analysis of the data indicated that the survey subscale measuring political activism ( $p < .0001$ ) was significantly lower than the other three survey subscales. In addition, a qualitative analysis on open-ended responses is also included.

## RECENT PUBLICATIONS

**1. Badgett, John L., and Edwin P. Christmann, Department of Secondary Education** (2009).

*Designing Elementary Instruction and Assessment: Using the Cognitive Domain.* Thousand Oaks, Calif.: Corwin.

**2. Badgett, John L., and Edwin P. Christmann, Department of Secondary Education** (2009).

*Designing Middle and High School Instruction and Assessment: Using the Cognitive Domain.* Thousand Oaks, Calif.: Corwin Press.

**3. Bouchat, R.R., Department of Mathematics** (2010) "Free Resolutions of Some Edge Ideals of Simple Graphs", *Journal of Commutative Algebra*, 2(1).

### Abstract

In this paper, the structure of the minimal free resolutions associated to a class of squarefree monomial ideals is studied by using the one-to-one correspondence between squarefree quadratic monomial ideals and the set of all simple graphs. By using the graphical structure of a tree, a comprehensive description of the Betti numbers associated to the corresponding edge ideal along with an implementation of this method in SAGE is provided. Additionally, for specific subclasses of trees, explicit formulas are given for the projective dimension and the Castelnuovo-Mumford regularity corresponding to the associated edge ideals.

**4. Christmann, Edwin P., and John L. Badgett, Department of Secondary Education** (2009).

*Interpreting Assessment Data: Statistical Techniques You can use.* Arlington, Va.: NSTA Press.

**5. Crothers, L. M., & Kolbert, J. B., Department of Counseling and Development** (2010).

Teachers' management of student bullying in the classroom. In S. R., Jimerson, S. M., Swearer, S. M., & D. L. Espelage (Eds.). *Handbook of bullying in schools: An international perspective* (pp. 535-546). New York: Routledge.

**6. Crothers, L., Kanyongo, G. Y., Kolbert, J. B., Lipinski, J., Kachmar, S. P., & Koch, G. D., Department of Counseling and**

**Development** (In press) *Department of Counseling and Development*. Job stress and locus of control in teachers: Comparisons between a United States' and Zimbabwean Sample. *International Review of Education*.

**7. Crothers, L., Schreiber, J. B., Field, J., & Kolbert, J. B., Department of Counseling and Development** (2009). Development and measurements through confirmatory factor analysis of the *Young Adult Social Behavior Scale (YASB)*: An assessment of relational aggression in adolescence and young adulthood. *The Journal of Psychoeducational Assessment*, 27, 17-28. DOI: 10.1177/0734282908319664

**8. Crothers, L. M., Field, J. E., Kolbert, J. B., Lipinski, J., Kanyongo, G. Y., Kachmar, S. P., & Koch, G., Department of Counseling and Development** (2009). A new look at teachers' job stress and locus of control using a multidimensional measure of stress. *The School Psychologist*, 63, 11-15.

**9. DiMarco, D., Department of English** (2011). "Going Wendigo: The Emergence of the Iconic Monster in Margaret Atwood's *Oryx and Crake* and Antonia Bird's *Ravenous*", *College Literature*. (accepted, to be published in October 2011).

### Abstract

According to the Canadian writer Margaret Atwood, the Wendigo is a mythical creature with a "ravenous hunger for human flesh" originating in the indigenous stories of "Algonquian-speaking people such as the

Woodland Cree and the Ojibway” who lived in the “eastern woodlands” of the northern United States and Canada (1995, 66). Storytellers frequently associate it with winter, “a time of scarcity, which gives rise to hunger, which gives rise to selfishness,” and Wendigo possession in humans signals the latter’s “spiritual selfishness” (Atwood 1995, 67) and greed. The process of this psychic and monstrous possession is, Atwood states, known as becoming or going Wendigo (1995, 62). In non-native tales, the Wendigo often emerges during times of imperial stalwartness since imperialism relies upon an uncompromising path toward domination and its negative impact on people and their environments. To illustrate the usefulness of Atwood’s interpretation to a reading of British film maker Antonia Bird’s contemporary work *Ravenous*, this essay will also investigate Atwood’s contemporary, novelistic Wendigo tale, *Oryx and Crake* (2003), as an application of her own theory. Only then will the essay analyze Bird’s deployment of the Wendigo in her film—which, unlike *Oryx and Crake*, directly establishes a specific temporal and geographical setting, during the Mexican-American war in the wilds of northern California—in order to consider how the Wendigo serves to critique Manifest Destiny and military resistance.

**10. Field, J., Kolbert, Jered.** Crothers, L. M., Hughes, T. L. (Eds.), *Department of Counseling and Development* (2009). *Understanding Girl Bullying and What To Do About It*. Corwin Press.

**11. Hadley, S.** (Ed.), *Department of Music* (2010). *Qualitative Inquiries in Music Therapy: A Monograph Series, Vol. 5*. Gilsum, NH: Barcelona Publishers.

**Abstract:** The studies in this volume of QIMT included two studies using modified grounded theory analyses: the first examining focus group interviews conducted with grieving adolescents receiving music therapy in a school setting; and

the second exploring the experiences of music therapists working with adults experiencing pain. The third study utilizes a phenomenologically informed naturalistic inquiry to examine the clinical-musical responses of Nordoff-Robbins music therapists while improvising with clients in order to examine what was going on in the therapist’s consciousness moment-to-moment. The final two studies in this volume also utilize naturalistic inquiry as the methodological approach: the penultimate examining the relationship between lyrics and music in improvised songs that were created in the context of Nordoff-Robbins music therapy sessions with a woman who sought out music therapy as a result of being diagnosed with non-Hodgkin’s lymphoma; the last exploring the first Nordoff-Robbins music therapy sessions that were provided for a parent-child dyad in which the parent was an active participant.

**12. Kolbert, J. B.,** Field, J. E., Crothers, L. M., & Schreiber, J., *Department of Counseling and Development* (2010). Femininity and depression mediated by social and relational aggression in late adolescence. *Journal of School Violence*, 9. 289-302. DOI: 10.1080/15388220.2010.483181

**13. Miller, M.,** Nendel, J., *Department of Physical Education* (2010). *Service-Learning in Physical Education and Related Professions: A Global Perspective*. Sudbury, MA: Jones and Bartlett Publishers, Inc.

**14. Yamamoto, J.,** Leight, J. (Eds.), *Department of Secondary Education* (2010). *Technology Leadership in Teacher Education: Integrated Solutions and Experiences*. Hershey, PA: IGI Global.

**15. Yamamoto, J.,** Kush, J.C., Lombard, R., Hertzog, C.J. (Eds.) *Department of Secondary Education* (2010) *Technology Implementation and Teacher Education: Reflective Models*. Hershey, PA: IGI Global.

## RECENT PRESENTATIONS

### 1. Constantine, J., *Department of Biology*

(Faculty sponsor: Rehorek SJ). 2010. Orbital and facial glands of the red spotted newt, *Notophthalmus viridescens* (*Salamandridae*). SRU Research Symposium 2010. (See Recent Projects for Dr. Rehorek.)

2. Crothers, L. M., Kanyongo, G. Y., Field, J. E., **Kolbert, J. B.**, Albright, C., Bell, G. R., Blasik, J. L., Debor, L., Fenclau, E., Paret, S., & Schwickrath, H., *Department of Counseling and Development* (2010, August). *The relationship between hyperfemininity and achievement of ego identity*. Poster session to be presented at the annual meeting of the American Psychological Association, San Diego, CA.

3. Crothers, L. M., Kanyongo, G. Y., Field, J. E., **Kolbert, J. B.**, Blasik, J., & Keener, D., *Department of Counseling and Development* (2009.). *Job stress and locus of control in teachers: Comparisons between a United States' and Zimbabwean sample*. Poster session presented at the annual meeting of the American Psychological Association, Toronto, Canada.

4. Field, J. E., **Kolbert, J. B.**, & Crothers, L. M., *Department of Counseling and Development* (2010, March). *Untangling the web: Prevention intervention for school bullying*. Presentation conducted at the American Counselors Association Annual Conference, Pittsburgh, PA.

5. Field, J., **Kolbert, J. B.**, & Crothers, L. M., *Department of Counseling and Development* (2009, March). "The girls--they go after each other": Prevention and intervention for girl bullying. Presentation conducted at the American Counselors Association Annual Conference, Charlotte, NC.

6. Hadley, S., & Hahna, N. D., *Department of Music* (2010, March 25). *Unveiling sites of privilege: Expanding the therapist's self-awareness*. Conference Presentation (5-hour CMTE) at the Mid-Atlantic Regional Chapter of the American Music Therapy Association Conference.

**Abstract:** This CMTE presented information from disability studies, critical race theory, feminist theory, and critical pedagogy in terms of their implications for music therapy education and clinical practice. Participants were encouraged to find ways to integrate these theories through introspection and discussion.

7. Hahna, N. D., & Schwantes, M. B., *Department of Music* (2010, March 26). *Survey of music therapy educators: Implications for feminist music therapy education*. Research poster presented at the Mid-Atlantic Regional Chapter of the American Music Therapy Association Conference.

**Abstract:** This study surveyed 188 music therapy educators regarding their views and use of feminist pedagogy and feminist music therapy. The purpose of this study was two-fold: (a) to determine how many music therapy educators used feminist pedagogy and (b) to determine if there was a relationship between the use of feminist pedagogy and academic rank of the participants. Seventy-two participants responded to this study, with 69 participants included for data analysis. Stake and Hoffman's (2000) feminist pedagogy survey was adapted for this study, examining four subscales of feminist pedagogy: (a) participatory learning, (b) validation of personal experience/development of confidence, (c) political/social activism, and (d) critical thinking/open-mindedness. The results revealed that 46% ( $n = 32$ ) of participants identified as feminist music therapists and 67% ( $n = 46$ ) of participants identified as using



feminist pedagogy. Results of a mixed ANOVA revealed a statistically significant difference within the four survey subscales ( $p < .0001$ ), no significant difference ( $p = .32$ ) for academic rank, and no significant interaction ( $p = .08$ ) of academic rank the four survey subscales. A Tukey post hoc analysis of the data indicated that the survey subscale measuring political activism ( $p < .0001$ ) was significantly lower than the other three survey subscales. In addition, a qualitative analysis on open-ended responses is also included.

**8. Hahna, N. D., & Crumling, A., *Department of Music*** (2010, April 9). *Does being a music major effect the amount of time one listens to music recreationally?* Presentation at the 2010 Student Symposium for Research, Scholarship, and Creative Activity. Slippery Rock University, Slippery Rock, PA.

**Abstract:** A survey was conducted to determine whether or not being a music major was influential to Slippery Rock University students' use of music for leisurely activities. A total of 58 participants responded to the survey with a return rate of 130 surveys. The survey was conducted by distributing a survey to all students in one Introduction to Music class as well as to students in Music Theory & Analysis I. The 58 participants comprised of 29 music majors and 29 non-music majors. Of the 29 music major surveys completed, all 29 were used in creating the data. One hundred and one surveys were returned from non-music majors. Using random sampling, 29 of the 101 were randomly picked to be a part of the participants. Results of the study revealed that 100% of music and non-music majors listened to music in their leisure time both before attending Slippery Rock University and while currently attending. The average amount of time non-music majors and music majors spent listening to music on a daily basis before college was 2-3 hours per day. The

average amount of time non-music majors and music majors spent listening to music on a daily basis currently in college was the exact same as before college at 2-3 hours per day. A discussion of the implications of the results of this study, limitations of this study and areas for future research are included.

**9. Hahna, N. D., & Kleinert, J., *Department of Music*** (2010, April 9). *A survey of music educators to determine preparedness for working with diverse learners.* Presentation at the 2010 Student Symposium for Research, Scholarship, and Creative Activity. Slippery Rock University, Slippery Rock, PA.

**Abstract:** This study surveyed music educators ( $N = 55$ ) to identify and evaluate the effectiveness of the training and experiences with diverse learners they received during their undergraduate education as well as during the duration of their career as a music educator. Emails were sent to music educators, using snowball sampling. The researcher-developed survey asked participants to first identify their undergraduate training and extra-curricular experience addressing diverse learners in the classroom, then rated the effectiveness of each experience individually as well as within the scope of the undergraduate program using a four-point Likert scale. The identification and evaluation process was repeated for participant professional experience, using the same Likert scale and job task listing. Of the participants, 46% had received a course that discussed working with diverse learners somewhere in the curriculum and 56% found this to be ineffective at preparing them to work with diverse learners. Sixty-eight percent of participants found peer mentoring and/or peer discussions to be effective in preparing them to work with diverse learners. A discussion of the results, limitations, implications, and areas for future research were addressed.

- 10. Jennifer Caprez, Department of Biology** (Faculty sponsors: Rehorek SJ and Smith, TD). Development of the nasolacrimal dust in the rabbit (*Oryctolagus cuniculus*). Sigma-Xi 19<sup>th</sup> annual undergraduate student research and creative accomplishment conference. April 10<sup>th</sup>, 2010. Science Complex at Penn State Behrend (Erie). (See Recent Projects for Dr. Rehorek.)
- 11. Jessica Johnson, Department of Biology** (Faculty sponsors: Rehorek SJ and Smith, TD). Best poster presentation, The nasolacrimal bony canal in the rabbit (*Oryctolagus cuniculus*). Sigma-Xi 19<sup>th</sup> annual undergraduate student research and creative accomplishment conference. April 10<sup>th</sup>, 2010. Science Complex at Penn State Behrend (Erie). (See Recent Projects for Dr. Rehorek.)
- 12. Jewell, B., Department of Biology** (Faculty sponsor: Rehorek, S. J.). 2010. Cephalic glands of two species of Plethodontid salamanders. SRU Research Symposium 2010. (See Recent Projects for Dr. Rehorek.)
- 13. Jewell, B.S., Department of Biology** (Faculty sponsor: Rehorek S.J.). 2009. Orbital and facial glands of the red salamander, *Pseudotriton ruber* (Plethodontidae). SRU Symposium for Student Research, Scholarship and Creative Activity. (See Recent Projects for Dr. Rehorek.)
- 14. Kolbert, J. B., Department of Counseling and Development** (2010, May). *Using solution-focused theory in consulting with parents*. Pennsylvania School Counselors Association Annual Conference, Lancaster, PA.
- 15. Kolbert, J. B., Department of Counseling and Development** (2009, October). *Using Reality and Solution Focused theory to promote academic achievement*. Western Regional Pennsylvania School Counselors Association Conference. Youngwood, PA.
- 16. Kolbert, J. B., Department of Counseling and Development** (2009, April). *School-based consultation with parents using solution-focused & structural theories*. Pennsylvania School Counselors Association Annual Conference, Hershey, PA.
- 17. Love, G., Cubero, C., Perdian, T., Alcohol & Other Drug Program, SRU Student Counseling Center** (2009, October 30). On October 30, 2009 and October 31, 2009, Slippery Rock Counseling and Development faculty member, Gerard Love, Ph. D., Slippery Rock Student Counseling Center faculty member, Chris Cubero, Ph. D., and Counseling Development Graduate Student and Graduate Assistant for the Student Counseling Center, Thomas Perdian, attended the International Coalition for Addiction Studies Education conference in Jersey City, New Jersey. The aforementioned faculty members and student presented on the collaboration between the Counseling and Development Department and the Student Counseling Center. This collaboration is designed to enhance student learning and experience by providing graduate students with the opportunity to conduct drug and alcohol assessments for the Student Counseling Center's Alcohol and Other Drug program. The presentation focused on the basic framework of the program, as well as provided both qualitative and quantitative data about the graduate student's experience.
- 18. Miller, V., Department of Music** (2010, March 27). *Practical applications of computer and MIDI technologies for people with physical and cognitive disabilities*. Conference Presentation at the Mid-Atlantic Regional Chapter of the American Music Therapy Association Conference.
- Abstract:** This presentation demonstrated how to incorporate various computer and MIDI technologies in music therapy sessions. Practical examples from sessions

with an Individual with Rett's Syndrome were referenced. Participants received information on the equipment needed, as well as the typical costs, to use this technology.

**19. Shuttleworth, S., Woolley, C., & Hahna, N. D., Department of Music** (2010, April 8). *The effects of music listening on the intake of pain medication and vital signs of patients in palliative and hospice care*. Poster Presentation at the 2010 Student Symposium for Research, Scholarship, and Creative Activity. Slippery Rock University, Slippery Rock, PA.

**Abstract:** The purpose of this pilot study will be to determine if music listening will have effects on the patient's pain medication intake and vital signs. Participants will include 30 adults in palliative or hospice care randomly assigned into two groups. Group A ( $n = 15$ ) will receive standard treatment without music therapy. Group B ( $n = 15$ ) will receive standard treatment with music therapy, and will receive CDs of preferred music to listen to for three (3) hours per day. The data will be collected for both groups as follows: two weeks baseline, three daily averages during two-week treatment period, and a two-week follow-up. The data will be analyzed on the following measures: pain medication intake, heart rate, and breathing rate scores using a one-tail  $t$ -test. Results of the one tail  $t$ -test (this is a proposed study, it has not been carried out) indicated that ... A discussion of the implications of the results of this study, limitations of this study, and areas for future research are included.

**20. Xenakis, N. Department of Biology** (Faculty sponsor: Rehorek, S.J.). 2010. Orbital and facial glands of the tiger salamander, *Ambystoma tigrinum*. SRU Research Symposium 2010. (See Recent Projects for Dr. Rehorek.)

**21. Yamamoto, J., Department of Secondary Education** (October 15-17, 2010). "Future teachers' reflections on teaching technology: what did they learn from service-learning?" IADIS International Conference on Cognition and Exploratory Learning in Digital Age (CELDA 2010), Timisoara, Romania.

## RECENT PROJECTS

### 1. Cubero, Christopher G., *Alcohol & Other Drug Program, SRU Student Counseling Center*

**Project Title:** Dissertation entitled *An Investigation of Master's Level Counselor-In-Training Multicultural Skill Competence and Personality* by Christopher G. Cubero (defended and accepted October 26, 2009 at East Carolina University in partial fulfillment of a Ph. D. in Rehabilitation Counseling and Administration).

**Abstract:** Counselor multicultural skill competence when working with people of differing race, age ethnicity, gender, and sexual orientation can influence the counseling relationship and therefore the overall counseling effectiveness. The current study aimed to expand our knowledge of Multicultural counseling competence (MCC) by focusing on the multicultural counseling skill competence (MCSC) of master's level counselors enrolled in internship and practicum courses. The purpose of this study was to explore relationships between self-perceived multicultural counseling skill competency and personality among counseling practicum and internship students. Findings indicated that master's level counselors-in-training perceived skill competence as above average. In terms of personality dimensions, the majority of the counselors-in-training scored as Responsible-Workaholics characterized by conscientiousness and responsibility. There was a significantly positive relationship between age and skill competence where for the most part older participants had higher perceived skill competence. In addition, MCSC was positively associated with higher levels of counselor satisfaction with supervision, previous number of

counseling sessions, and previous number of multicultural-related courses. Stated differently, the current findings indicated that more previous experience in counseling, more training in multicultural issues via coursework, and a higher satisfaction with counseling supervision were positively related to higher levels of perceived skill competence. On average, Non-Caucasian counselors-in-training tended to have higher MCSC ( $p = .001$ ). In terms of a relationship between MCSC and personality dimensions, there were no significant relationships at the  $p = .10$  level. However, significance between some personality dimensions (e.g. Creative-Daydreamer) and perceived skill competence ( $p$  values  $< .20$ ) may indicate possible relationship trends between personality and skill competence.

**2. Hadley, S., Hahna, N. D., Miller, V. H., & Bonaventura, M., Department of Music** (2010). *The use of music technology as an adaptive tool in music therapy*. Ongoing research. Grant source: Slippery Rock University, Slippery Rock, PA

**3. Hahna, N. D., & Catino, C., Department of Music** (2010, March 23). *HeARTbeat of Haiti: Ethnographic research on Haitian culture*. Performance. Slippery Rock University, Slippery Rock, PA.

**4. Hahna, N. D., & Feagin, M., Department of Music** (2010). *Are there best practices in music therapy for adults with autism? Investigating the relationship between interventions and outcomes*. Ongoing research. Slippery Rock University, Slippery Rock, PA.

**5. Hahna, N. D., & Junker, A., Department of Music** (2010). *A survey on music therapy students' song knowledge*. Ongoing research. Slippery Rock University, Slippery Rock, PA.

**6. Hahna, N. D., & St. Ives, S., Department of Music** (2010). *A general survey of music therapy students' practices and ideas*. Ongoing research, Slippery Rock University, Slippery Rock, PA.

**7. Lee Layton**, a senior Biology major, has been doing research with **Dr. DeNicola , Department of Biology**, examining recovery of benthic stream-algae (algae that grows on rocks) following treatment for impacts caused by coal mining activities in The Slippery Rock Creek Watershed.

**Abstract:** Slippery Rock Watershed has been severely impacted by acid mine drainage (AMD) for more than a century, predominantly from coal mining in a 70 km<sup>2</sup> area at the headwaters of the stream. When minerals associated with coal seams are exposed to oxygen and water during mining, they undergo a series of chemical reactions to produce water that is highly acidic and has high concentrations of dissolved metals, both of which are toxic to aquatic organisms. Treatment of AMD discharges in the headwater area of Slippery Rock Creek uses cost-effective, recent technology called passive treatment. Most passive treatment systems employ pretreatment of AMD by passing the discharge through buried limestone and/or organic substrates before it flows into an oxygenated pond or wetland. Since 1995, 15 major reclamation projects have been carried out in the watershed involving construction of passive treatment systems that treat approximately 30 discharges totaling 2.8 million m<sup>3</sup>/y of water. In previous research with students, Dr=s. DeNicola and Stapleton have shown that there has been a modest improvement in stream water quality in the watershed over the last 15 years resulting from passive treatment.

A major energy source at the base of the food chain in streams is benthic algae, which grows attached to rocks on the stream bottom. The

amount of algae produced in a period of time is called primary productivity. Lee measured primary productivity of benthic algae in spring, summer and fall 2009 at 4 types of stream sites in the headwaters; a heavily AMD- impacted site above all treatment, a site downstream of all treatment, and 2 unimpacted reference streams (small and large). Productivity was determined by measuring changes in dissolved oxygen produced by the algae on the rocks in sealed, recirculating chambers. In addition, he examined the abundance of different types of photosynthetic pigments of the algae as a measure of algal abundance and health. He found that algal abundance and productivity was highest at the reference streams, lowest at the site untreated for AMD, and moderate at the site below AMD treatment. Similarly, pigment analysis indicated that the algal communities at the site below treatment were less stressed than for the 2 sites affected by AMD, but not as healthy as algae at the reference sites. The results indicate that AMD drastically reduces the productive capacity and health of benthic algae, but that passive treatment systems have the potential to reduce impacts. Recovery of algae associated with passive treatment should benefit organisms higher in the food chain such as aquatic insects and fish. Lee has presented his research at the Sigma Xi Undergraduate Research Conference and The Westminster College Student Symposium on the Environment.

**8. Mitrik, Robert, Department of English:** In late February 2010, Robert Mitrik signed a publishing agreement with The Edwin G. Mellen Press. The agreement commissions his first book, which is based on his scholarly research: "Applications of Literary Semiotics for English pedagogies."

**Abstract:** This research focuses on a pedagogical application for lower-division studies

in English (beginning with a university's service learning course for reading and writing), yet it addresses advanced composition, creative writing, literature, and English education pedagogies as well, since it projects a profound role for semiotic scholarship.

The research offers a tested learning method, one that is established in the oscillation between philosophy and rhetoric provided by Literary Semiotics, one that is focused on texts: written, oral, visual, et al., one that is, therefore, approached in the student-scholar's engagement with the texts of life and the texts of learning.

The work offers a theoretical engine for learning to learn within a liberal approach to texts. Within this approach, students learn to gather an understanding of rhetorical power along with a philosophical ethic for knowledge acquisition and the generation of new ideas. The book will offer a learning environment where students and teachers work together so that English studies can regain its crucial role within the traditional ideals of a liberal education.

These traditional ideals of a liberal education can be found in statements that ultimately all find their beginnings within ancient, classical texts, but the ideas remain relevant today for higher education efforts that strive to develop an enlightened view of the whole person in balance with the point where the modern university aligns itself with the corporate profit model, where training occurs for real jobs in a dynamic marketplace.

In this book, Mitrik will argue that English in higher education must focus on the intrinsic or internal person, the liberal aspects of the soul that engage philosophical ethics in the recognitions and applications of rhetoric, and will show how Literary Semiotics accomplishes this focus with its theoretical engine based in texts as

perceptions of truth in the world, as bases for ethical and persuasive action in our vibrant society.

#### **9. Rehorek, Susan. *Department of Biology***

**Project Title:** Development of the nasolacrimal duct in rabbits

**Abstract:** The nasolacrimal duct (NLD) connects the orbit to the nose. That is why tears come out of our noses. The NLD is common to most tetrapod vertebrates (four-legged animals with backbones). In the orbital region, it drains the orbital fluids, produced by a variety of glands including the Harderian, lacrimal and palpebral (eyelid) glands. In mammals, the NLD opens out into the nasal cavity, passing through a bony canal. However, very little is known about the bones that contribute to this duct. Additionally, very little is known about when (in what fetal stages) and how (from which direction: from the nose to the orbit or vice versa) this duct develops. Previous developmental studies have examined only lizards and snakes, in these cases the duct starts at the vomeronasal organ (an accessory organ of smell which snake access when tongue-flicking). In the rabbit, however, it appears to develop in the opposing direction (from the orbit towards the nose). In all three cases, the duct is fully developed by birth. In the rabbit, what we found was that it was fully developed by the start of the third trimester (when the bones of the nasal region began to form). At this stage, the nasal cavity of the rabbit is much shorter than in the adult. As a result, the NLD is crooked, and as the nasal region grows, the NLD itself straightens out. Thus, I have directed the students in this research to 1)

document this growth (when do the bones form? how do they form around the tube? which parts are longer at which stage?) and 2) describe the structure of the bony canal itself in the adult (which bones make up the canal?). There are scattered references to the NLD and it's bony canal in the literature and there is nothing on the development of this structure.

Listed below are the students who have presented their research on this topic:

Jessica Johnson (faculty sponsors: Rehorek SJ and Smith, TD). The nasolacrimal bony canal in the rabbit (*Oryctolagus cuniculus*). Sigma-Xi undergraduate symposium.

Jennifer Caprez (faculty sponsors: Rehorek SJ and Smith, TD). Development of the nasolacrimal duct in the rabbit (*Oryctolagus cuniculus*). Sigma-Xi undergraduate symposium.

#### 10. Rehorek, Susan. *Department of Biology*

**Project Title:** Salamander faces

**Abstract:** This is an ongoing research project under the supervision Dr Susan J Rehorek, Department of Biology. Salamanders are thought to represent the most primitive form of tetrapod vertebrates (four-legged animals with backbones) and thus may give some information regarding the evolution of structures described in higher vertebrates. My area of expertise is the structure of orbital glands. There are at least three large orbital glands in tetrapod vertebrates, located in different part of the orbit and not all are present in the same animals. 1) The Harderian

gland. This is an unusual structure located in the orbit, near the nose. It is associated with the third eyelid and is found in many tetrapod vertebrates including amphibians (frogs and salamanders), reptiles, birds and most mammals (but curiously not Humans, upper primates and several bats). 2) The lacrimal gland lies in the other side of the orbit (closer to the ear). It is present in most tetrapod animals. 3) A palpebral (eyelid) gland which lies in the lower eyelid of alligators. In order to attempt to unravel which glands evolved first, we need to examine the presumed primitive condition in salamanders. To this effect, I have directed several student projects with the aim of describing the orbital glands of salamander. There have been few publications describing the salamander orbital glands. These publications (in 1906 and 1887) are a little vague and do not take into account the variations observed in higher vertebrates. Thus, my students and I are describing the structure of these glands in several North American salamanders.

Listed below are the student presentations regarding these descriptive efforts:

Xenakis, N (faculty sponsor: Rehorek SJ). 2010. Orbital and facial glands of the tiger salamander, *Ambystoma tigrinum*. SRU Research Symposium 2010.

Jewell, B (faculty sponsor: Rehorek SJ). 2010. Orbital and facial glands of two species of Plethodontid salamanders. SRU Research Symposium 2010.

Constantine, J (faculty sponsor: Rehorek

SJ). 2010. Orbital and facial glands of an aquatic salamander, *Notophthalmus viridescens*. SRU Research Symposium 2010.

Jewell, B (faculty sponsor: Rehorek SJ). 2009. Orbital and facial glands of the red salamander, *Pseudotriton ruber* (Plethodontidae). SRU Symposium for student research, scholarship and creative activity.

**11. Silva, J., Bailey Library, and Manning, M.**

**Project Title:** The Role of Contemporary Archivists at American Colleges and Universities

**Abstract:** A survey of archivists working in American colleges and universities was posted on the Society of American Archivists (SAA) listserv and to the major regional archival organizations nationwide in November and December 2009. The survey was designed to determine how archives are administered and what roles the archivists perform both within and outside of the archives.

Anecdotal evidence suggests that contemporary archivists are juggling an increasing variety of roles within their respective institutions. Our hypothesis is that this is especially true for archivists working at medium-sized colleges and universities. A review of job descriptions for archivist positions posted to the SAA Archives and Archivists listserv suggests more specialized job duties at larger-sized universities. Small institutions often do not employ archivists at all.

Survey responses are broken down according to Carnegie Classifications and analyzed by professional responsibilities. The survey defines and quantifies the duties of archivists working in

American colleges and universities including the extent to which archivists are involved with records management and institutional repositories. It also examines the hierarchical placement of archives within institutions, how archives are administered, the extent of scholarly activity undertaken by archivists and other related questions. In analyzing the survey data, we hope to discover both the benefits and the challenges related to having varied responsibilities. We anticipate publishing an article based on our findings.

**12. Teodoro, Melissa. Department of Dance**

**Project Title:** SRU dance majors participate in the research and re-construction of 18<sup>th</sup> century Afro-Colombian dances



**Abstract:** During the spring

semester of 2008, Melissa Teodoro, Assistant Professor of the Department of Dance, worked with a group of 20 dance majors in the re-construction of four traditional Afro-Colombian dances. The semester long research process included lectures, video viewing, readings, cultural activities and movement sessions that all helped the students gain a solid understanding of the

Afro-Colombian culture, its historic background, and its different artistic manifestations.







Through existing written and audio-visual documentation, in addition to Professor

company director, Jennifer Keller, who toured schools in the Slippery Rock vicinity.

Teodoro's knowledge of Afro-Colombian dance forms obtained through ethnographic research, the students were able to embody the 18<sup>th</sup> century dances and their complex movement vocabulary and choreographic patterns. The resulting product was a 30-minute compilation of dances titled La Candela Viva that featured dances such as El Bullerengue, El Garabato, La Cumbia and el Mapalé.



During the 2009-2010 academic year, the Afro-Colombian ensemble performed in various venues on and off-campus.



In the fall of 2009, the ensemble performed at

the Faculty and Guest Artist Dance Concerts, and the SRU Celebration of Giving.

In the spring of 2010, the ensemble was invited to the Latin American Festival in Pittsburgh and the SRU Kaleidoscope Arts Festival. The dances were also included in the Rock Dance

Company's 2009-2010 repertoire by invitation of

