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Speed Stacks!

Deer Creek Elementary schools: Deer Creek Elementary (191), Grove Valley, Prairie Vale (186) and Spring Creek (233) participated in the World Speed Stacking Association’s Stack Up 2013. This event was to break a Guinness World Record of 483,658 people speed stacking at multiple locations in one day. (Number in parenthesis, is number of student stackers.)

Speed Stacking is a great activity to develop motor skills, patterning, sequencing, focus and concentration. It promotes eye-hand coordination, ambidexterity, bilateral proficiency, encourages students to set goals, persevere and reinforces practice, as well as they value of teamwork.

All five components of physical fitness can be used during speed stacking events. Flexibility, muscular strength and endurance, cardiovascular endurance, body composition, agility and coordination, balance, reaction time, speed, and power activities can be completed individually or with partners/groups.

Speed stacks is a wonderful program that we incorporate into our curriculum each year and any school can participate regardless of funding. There is a Speed Stacks Loaner Program that provides you with all you need for your classes. Return S & H is all that is charged. You can then provide ordering opportunities for your students and earn credit to start putting together your own class set. You can contact www.speedstacks.com or 1-877-468-2877 for more info.

Have fun and we hope you join us next year for Stack Up!

Chris Weatherford
Editor’s Message

Thank you for all of your continued support of the OAHPERD organization. As the journal editor, I try to provide relevant information that will help you in your professional lives. I am planning to send out a survey over the listserv to inquire about how to make the journal better. It will just be a link you can click on and fill out. I am excited to hear from you. Your board and council have been working very hard to provide a top-rate conference. Please talk to your colleagues about attending or becoming a member. Thank you again.

Thank you,

Dr. Tyler Tapps
In Memoriam
By Nicki Keele

Kate Kisner Cushing

Kate Cushing, daughter of William Hugh Kisner and Alice (Martin) Kisner, was born February 7, 1921 in Tahlequah, Oklahoma and departed this life January 7, 2014 at age 92. As an 8 year old and the youngest of 6 children, she enjoyed roller skating on the family’s tennis court, not realizing the importance of tennis in her future. A graduate of Northeastern State University in 1941, she began teaching and coaching in Tulsa in 1946 where she taught at Holland Hall, the University of Tulsa, Benedictine Heights College and Bishop Kelley. She retired from teaching after a 49 year career, 28 of those years at Monte Cassino where she taught Physical Education, served as Dean of Girls, cheerleader sponsor and tennis coach. Through her 70th year she continued to both teach and coach tennis. She was the Oklahoma representative for education and recreational tennis for the Missouri Valley Tennis Association, collecting thousands of donated racquets and tennis balls for distribution and encouragement of tennis as a lifetime sport.

In 1996 her dedication to tennis was recognized by the Missouri Valley Section of the USTA as she was inducted into their Hall of Fame. She again retired at age 82 as Secretary-Treasurer of the Oklahoma Tennis Coaches Association who honored her with induction into the Oklahoma High School Tennis Coaches’ Hall of Fame. With patience, compassion and commitment she introduced tennis to countless students as a lifetime adventure. Whether she was enjoying time with family, friends or coaching on the tennis court, she lived her life with boundless energy, enthusiasm, dedication and fairness. She will long be remembered and greatly missed. She was preceded in death by her husbands, Ronald Ekey and John Cushing and by her grandson, Devin DeJarnette. She is survived by her daughter Ronda DeJarnette, husband Don, Augusta GA; son Mike Cushing, Corvallis, OR; son Tim Cushing, wife Terri, Stillwater, OK; grandchildren: Darcy Kate Phelps, husband Mike, Augusta GA; Doug DeJarnette, wife Liza, Tulsa, OK; Tyler Cushing, Edmond, OK; Trey Cushing, Stillwater, OK; great grandchildren: John DeJarnette, Hadley Kate DeJarnette, Audrey Kate Phelps, Lydia DeJarnette and Livia DeJarnette. In lieu of flowers, memorial donations may be made in Memory of Kate Cushing for the Endowed Scholarship Fund at Monte Cassino School, 2206 S. Lewis Ave., Tulsa OK 74114, attention: Development Office.

*Obit was from Freeman Harris website*
Call for Presenters
October 6-7, 2014
UCO Conference
Center Edmond, OK

Individuals participating in programs must be OAHPERD members and must pay the convention registration fee if they are professionally engaged or pursuing study in the field of health, physical education, recreation, and/or dance in Oklahoma. Request for waiver of this requirement must be made by the appropriate Division Vice President.

If you are interested in presenting October 6 or 7 at the 2014 OAHPERD State Convention, please complete this form and mail/email to:

Convention Manager
C/O Donna Cobb
College of Education and Professional Studies
University of Central OK
Edmond, OK 73034
dcobb@uco.edu

Email: dcobb@uco.edu
Phone: 405-974-5298

Submissions must be received by
April 7, 2014

Application page 1 of 2

Presenter(s): The following must be filled out completely. Please do not list individuals as co-presenters unless you have a definite commitment that they will appear at the program with you on convention date.

Speaker Name:

School/Agency Affiliation:

Address:

City: State: Zip:

Phone: Fax:

Email:
2. Program Title: (Limit to 10 words or less)

3. Brief Description of Presentation for Final Program: (25 words or less; presentations are 50 minutes in length)

4. Brief bio for each presenter: (30 words or less)

5. Mode of Presentation:
   - Lecture
   - Audience Participation
   - Panel Discussion (#of panelists)

6. Division: Please check the appropriate division and section (if applicable).
   - Physical Education
     - Elementary Section
     - Secondary Section
     - Athletic Section
     - Adapted Section
   - Dance Section
   - College Section
   - Exercise Science Section
   - Student Section
   - Research Section
   - Health Division
   - Recreation Division

7. Please check all requested AV/technology needs (presenters are not allowed to bring their own AV/technology equipment):
   - Video/Computer Projection
   - Easel pad & markers
   - VCR/DVD Player
   - Microphone
   - CD Player

Note: If your presentation is accepted you will be asked to send any electronic presentation materials to dcobb@uco.edu by September 23, 2014.
Health Educator of the Year

This award will be given to a health educator in each of the following school levels:

- Health Education Professional of the Year Award - School (K-12)
- Health Education Professional of the Year Award - College/University

The purpose of this award is to encourage and recognize outstanding teaching and professional involvement by educators/professionals in the area of Health Education.

The candidate must be someone who:

1. Has major responsibility for teaching, programming, or administering effective health education programs.
2. Has at least five years experience in the category where they are applying.
3. Serves as a positive role model epitomizing the values and desired outcomes of health education.
4. Utilizes various teaching strategies and incorporates innovative learning experiences based on developmental social and psychological needs of students and/or clients.
5. Shows interest in and sensitivity to the needs of students, clients and fellow professionals.
6. Assumes responsibility for his/her professional growth and evidences professional commitment through membership and involvement in local, state and national health organizations.
7. Currently a member of OAHPERD, AAHPERD, AAHE, and must attend the SDAAHPERD convention.

Please send the following information:

Name:
Place of Employment:
Address:
Phone #:
E-mail:
The Virginia Peters Higher Education Award

Criteria

The applicant/nominee must be an educator who:
1. Prepares Oklahoma public and private physical education teachers;
2. Oversees, directs and/or advises student teachers in the field of physical education;
3. Serves as a positive role model epitomizing personal health and fitness enjoyment of activity, and sensitivity to the physical and emotional needs of all students;
4. Utilizes various teaching methodologies and plans innovative learning experiences;
5. Is a current OAHPERD member, regularly attends and/or presents at state conventions/workshops;
6. Is a current member of AAHPERD and NASPE and has attended and/or presented at Southern District AAHPERD and/or National Conventions.
7. Nominees shall attach documentation for each of the criteria. Additionally, a letter of recommendation from a department chair or dean should be attached.
Recreation Professional of the Year

For the purposes of this award, a Recreation Professional is defined as a person who has major responsibility for teaching recreation pre-professional/professionals of conducting recreation programming and/or administration in an educational, public, or private recreation setting.

The candidate must be someone who:

1. Serves as a positive role model epitomizing the values and desired outcomes of recreation.
2. Demonstrates enthusiasm for the recreation profession and his/her role in it.
3. Shows interest in, and sensitivity to the needs of students, clients, and fellow professionals.
4. Utilizes various methodologies and implements creative, innovative, safe and effective courses/recreation programs based on:
   a. The developmental, social, and psychological needs of students and clients.
   b. The philosophies, purposes, needs and resources of the sponsoring institution.
5. Assumes responsibility for his/her professional growth and evidences professional commitment through membership and involvement in local, state, and national recreation organizations.
6. Is a current member of AAHPERD and must attend the Southern District Convention.

Please send the following information:

Name:
Place of Employment:
Address:
Phone #:
E-mail:
Elementary “Physical Education” Teacher of the Year

For the purpose of this award, a Physical Educator is defined for the purposes of this award as a person who has major responsibility for teaching physical education in grades designated (PK-5) for each award.

The candidate must be someone who:
1. Has taught a minimum of six years at the school level designated by the award.
2. Serves as a positive role model epitomizing the personal health and fitness, enjoyment of activity, sportsmanship, and sensitivity to the needs of his/her students.
3. Utilizes various teaching methodologies and plans innovative learning experiences.
4. Conducts a balanced and sequential curriculum.
5. Evidences professional commitment through membership and involvement in local, state, and national physical education organizations.
6. If selected, and wishes to be moved on to the district and national competition, is a current member of AAhPERD and NASPE and must attend the AAhPERD District and possibly the National Convention.

Please send the following information:
Name:
Place of Employment:
Address:
Phone #: 
Middle School “Physical Education” Teacher of the Year

For the purpose of this award, a Physical Educator is defined for the purposes of this award as a person who has major responsibility for teaching physical education in grades designated (6-8) for each award.

The candidate must be someone who:

1. Has taught a minimum of six years at the school level designated by the award.
2. Serves as a positive role model epitomizing the personal health and fitness, enjoyment of activity, sportsmanship, and sensitivity to the needs of his/her students.
3. Utilizes various teaching methodologies and plans innovative learning experiences.
4. Conducts a balanced and sequential curriculum.
5. Evidences professional commitment through membership and involvement in local, state, and national physical education organizations.
6. If selected, and wishes to be moved on to the district and national competition, is a current member of AAHPERD and NASPE and must attend the AAHPERD District and possibly the National Convention.

Please send the following information:

Name:

Place of Employment:

Address:

Phone #:

E-mail:
Secondary “Physical Education” Teacher of the Year

For the purpose of this award, a Physical Educator is defined for the purposes of this award as a person who has major responsibility for teaching physical education in grades designated (9-12) for each award.

The candidate must be someone who:
1. Has taught a minimum of six years at the school level designated by the award.
2. Serves as a positive role model epitomizing the personal health and fitness, enjoyment of activity, sportsmanship, and sensitivity to the needs of his/her students.
3. Utilizes various teaching methodologies and plans innovative learning experiences.
4. Conducts a balanced and sequential curriculum.
5. Evidences professional commitment through membership and involvement in local, state, and national physical education organizations.
6. If selected, and wishes to be moved on to the district and national competition, is a current member of AAHPERD and NASPE and must attend the AAHPERD District and possibly the National Convention.

Please send the following information:
Name:
Place of Employment:
Address:
Phone #:
E-mail:
Adapted Physical Education Teacher of the Year

The Oklahoma Association for Health, Physical Education, Recreation, and Dance is seeking nominees for the annual Adapted Teacher of the Year award.

For the purposes of this award, an adapted physical educator is defined as a person assigned at least 50% of his/her teaching responsibility:
1. In providing direct and/or consultative services to individuals with disabilities ages birth to adult. or
2. In providing appropriate instruction, support, and modifications to individuals with disabilities ages birth to adult.

The candidate must be someone who:
1. Conducts an appropriate physical education program as reflected in the students’ IEP and generally accepted standards of practice for APE.
2. Utilizes various teaching methodologies and plans innovative learning experiences to meet the needs of all students.
3. Serves as a positive role model epitomizing personal health and fitness, enjoyment of activity, and sensitivity to the physical and emotional needs of all students.
4. Participates in professional development opportunities.
5. Is a current OAHPERD member.

Self-nominations are welcomed and encouraged. Please send the following information to:

Name:
Place of Employment:
Address:
Phone #:
E-mail:
Betty Abercrombie Scholar Award

Call for Nominations

The Betty Abercrombie Scholar Award is designed to (1) promote and stimulate scholarly productivity among professionals representing health, physical education, recreation, leisure, dance and sport, and (2) recognize scholars who have made and continue to make noteworthy contributions to the scholarly enterprise.

The following criteria are used by the selection committee. The individual selected:

1. must be a member of AAHPERD and OAHPERD.
2. should have achieved a commendable record evidenced by creative productivity to enhance the profession of health, physical education, recreation and dance.
3. shall be currently involved in the scholarship of promoting the fields of health, physical education, recreation and dance through various meaningful contribution such as:
   a. Articles in refereed journals
   b. Scholarly contributions to books
   c. Scholarly presentations to professional meetings
   d. Acquisition of grants
   e. Officer of professional organization
   f. Major projects
   g. Professional development
   h. Development of curricular and instructional activities
   i. Contributions to the profession including research

4. must be willing to assume responsibilities so designated for a period of one year to include:
   a. making a presentation at the annual OAHPERD Convention the following year.
   b. Serving as chair of the selection committee for the following year.
OAHPERD Honor Award

Any member may submit names for consideration for an Honor Award. Resume supporting the nomination should be included.

Qualifications:
1. Must have served a minimum of ten (10) years in Oklahoma.
2. Must be a member of the National Association in their special field of interest.
3. Must be a member of OAHPERD for five (5) years preceding the award.
4. Must demonstrate ethical professional practices.
5. Must show prominence in some of the following:
   a. Excellence in teaching
   b. Outstanding administrative achievement
   c. Contribution to research and professional publications
   d. Leadership in state, district, and national professional associations
   e. Meritorious service within the professional
Emma W. Plunkett Undergraduate Scholarship Award Chair

The candidate must:

1. Be of Junior or Senior level standing planning to graduate in May.
2. Be a current member of OAHPERD.
3. Have a minimum of a 3.0 GPA on a 4.0 scale
4. Be a resident of Oklahoma

Application Checklist

☐ All required information is included.

☐ Academic Progress:

☐ Institution; Degree Program; Major; Academic Advisor; Faculty Endorsement; Hours Required for Degree; Hours completed (College only); Expected Graduation Date; Cumulative Grade Point Average at Certifying Institution; Academic Honors; Awards; Intramural or Varsity Sports; Active Professional Memberships; Offices Held; Other Organizations; Offices Held; Scholarships; Related Work Experience.

☐ Application is signed by a faculty advisor or department head or a letter of endorsement is included as an attachment verifying GPA.

☐ Application is accompanied by the following:

☐ Transcript w/ letter of endorsement or official transcript w/ university seal
Helen Corrubia Undergraduate Scholarship Award Chair

The candidate must:

1. Be of Junior or Senior level standing planning to graduate in May.
2. Be a current member of OAHPERD.
3. Have a minimum of a 3.0 GPA on a 4.0 scale
4. Be a resident of Oklahoma

Application Checklist

☐ All required information is included.
  ☐ Academic Progress:
    ☐ Institution; Degree Program; Major; Academic Advisor; Faculty Endorsement; Hours Required for Degree; Hours completed (College only); Expected Graduation Date; Cumulative Grade Point Average at Certifying Institution; Academic Honors; Awards; Intramural or Varsity Sports; Active Professional Memberships; Offices Held; Other Organizations; Offices Held; Scholarships; Related Work Experience.

☐ Application is signed by a faculty advisor or department head or a letter of endorsement is included as an attachment verifying GPA.

☐ Application is accompanied by the following:
  ☐ Transcript w/ letter of endorsement or official transcript w/ university seal
Karen J. Dowd Undergraduate Scholarship Award Chair

The candidate must:

1. Have completed a minimum of 60 hours of college credit.

2. Be a current member of OAHPERD.

Application Checklist

☐ All required information is included.

☐ Academic Progress:

☐ Institution; Degree Program; Major; Academic Advisor; Faculty Endorsement; Hours Required for Degree; Hours completed (College only); Expected Graduation Date; Cumulative Grade Point Average at Certifying Institution; Academic Honors; Awards; Intramural or Varsity Sports; Active Professional Memberships; Offices Held; Other Organizations; Offices Held; Scholarships; Related Work Experience.

☐ Application is signed (if mailed) by a faculty advisor or department head or accompanied by a letter of endorsement including a statement verifying the GPA is correct.

☐ Application is accompanied by the following:

☐ Official transcript (with letter of endorsement or if mailed official university seal) (All courses, Grades and GPA must be readable)

☐ Present vitae or resume

☐ Paper (minimum of 500 words) reflecting the applicant’s personal and professional philosophy.
Valerie Colvin Graduate Scholarship Award Chair:

The candidate must be someone who:

Be a Master’s degree candidate

Have completed a minimum of 15 hours

Have a minimum GPA of 3.5 in an Oklahoma institution (based on 4.0 maximum)

Be a current member of OAHPERD

Application Checklist

☐ Form is completed by computer or in ink and signed by:
  ☐ Student
  ☐ Faculty advisor or dept/area chair letter of endorsement

☐ Form is completed and accompanied by:
  ☐ Academic Progress: Institution; Degree Program; Major; Academic Advisor; Faculty Endorsement; Hours Required for Degree; Hours completed (College only); Expected Graduation Date; Cumulative Grade Point Average at Certifying Institution; Academic Honors; Awards; Intramural or Varsity Sports; Active Professional Memberships; Offices Held; Other Organizations; Offices Held; Scholarships; Related Work Experience.

☐ Transcript with faculty endorsement or university seal and all grades with GPA shown (Must include all undergraduate work and graduate work) (When scanned, courses, grades and GPA must be readable)

☐ Current vitae or resume

☐ Description of Future Plans and Goals  (150 words or less)
Hoops For Heart gives students several great opportunities: helping kids with special hearts; learning the benefits of physical activity, healthy eating and avoiding tobacco; and raising funds for research and programs to fight heart disease and stroke. Besides having fun, students will learn basketball skills, supporting the National Association for Sport and Physical Education (NASPE) Standards of Physical Education and the American Association for Health Education (AAHE) Standards. Join millions of kids in serving others, saving lives and supporting research — hold a Hoops For Heart event!

**DID YOU KNOW?**

- Obesity and physical inactivity are major risk factors for cardiovascular disease.
- On average, American children and adolescents spend nearly 4 hours watching television every day.
- Obesity among our nation’s youth has tripled in the last two decades.
- Overweight adolescents have a 70 percent chance of becoming overweight adults.
- A number of studies have demonstrated that increased physical activity is linked to better school performance.

**Call 1-800-AHA-USA1 or visit americanheart.org/hoops to get your school involved.**
OAHPERD Journal Peer-Review Guidelines for Authors

Manuscripts involving practical applications for the HPERD readership are priority. Manuscripts that are informational and that involve scholarly research are also encouraged, but must address practical application. You may also submit manuscript materials pertaining to OAHPERD news, statewide news, national news and other items which are not peer-reviewed. The author guidelines in this document apply only to peer-reviewed manuscripts.

Submission Deadlines:
Spring Journal (mid-April): Deadline for peer-reviewed manuscripts February 1st, all other items March 1st
Fall Journal (mid-September): Deadline for peer-reviewed manuscripts July 1st, all other items August 1st.
Winter Journal (mid-December): Deadline for peer-reviewed manuscripts October 1st, all other items November 1st.

Basis for Acceptance of a Manuscript for Publication:
1) Significance to the HPERD profession
2) Accuracy of the material
3) Originality of material
4) Clarity of material
5) Validity of material
6) Compliance with OAHPERD guidelines for submission

Preparation of the Manuscript:
- Manuscripts must be submitted using Microsoft Office Word
- Preferred length of manuscripts submitted, including tables, graphs, references, etc., is 5-12 double-spaced, typed pages using 12 point font. Longer manuscripts will be returned to the author without review. Shorter manuscripts of interest to the readership are appropriate to submit and will be reviewed.
- Manuscripts should be written in third person.
- American Psychological Association (APA) format should be used throughout the manuscript.
- Keep direct quotations, especially lengthy ones, to a minimum (see APA style for formatting)
- Insert line numbering in the manuscript as it is helpful in communicating location if there are questions or corrections to be made. (Microsoft Word = File, Page Setup, Layout, Line Numbering, Check Line Numbering Box, Continuous, Apply)
OAHPERD Journal Peer-Review Guidelines for Authors—Page 2

Submitting the Manuscript:

- E-mail manuscript and author(s) information in separate files as attachments to the OAHPERD journal editor, Dr. Tyler Tapps (tyler.tapps@okstate.edu). There should be no identifying information in the manuscript itself, as they are blind reviewed. **In the e-mail include a statement indicating the manuscript has not been submitted (simultaneously) or published elsewhere.**
- There should be no identifying information in the manuscript itself, as they are blind reviewed. In the e-mail include a statement indicating the manuscript has not been submitted (simultaneously) or published elsewhere.
- Include all original (not resized) photos, artwork, and illustrations
- Photos, artwork, tables, illustrations, and other additions to text should be captioned and placed in the document file where they should be located in the published article. They may also be sent on a separate page or in a separate file as long as it is clear where they should be placed. (In some cases they may need to be moved due to publication considerations.)

Review of the Manuscript:

- OAHPERD’s journal advisory board is made up of five members appointed by the journal editor, with the journal editor serving as chair.
- Each manuscript submitted for peer review will be sent by the editor to advisory board members. Each manuscript will be reviewed by at least three advisory board members.
- If the editor determines that the manuscript topic falls outside the expertise of board members, an outside reviewer from the field may be solicited.
- All peer reviews will be blind. The editor will not send the authors’ names or personal information with the manuscript to the journal advisory board.
- The journal advisory board may provide corrections with regard to grammar or spelling without notifying the author as long as it does not change the meaning of the content. However, the lead author will be notified and asked to make corrections, if the errors are numerous or there are significant revisions required in order for the manuscript to be published. If the manuscript is considered of great or vital interest to the readership and the changes/corrections needed are not deemed to be overwhelming, members of the journal advisory board are encouraged to assist the author(s) in developing the manuscript. The lead author will be notified regarding status of their manuscript.
- If a manuscript is selected for the journal, it will be published in the earliest available issue. (Manuscripts may be pushed to a later journal due to space and printing constraints. The lead author will be notified.)
- If a manuscript is found to be partially or completely plagiarized: 1) it will not be published, 2) the author(s) will receive a formal letter, 3) the author(s) place of employment will receive a copy of the letter, and 4) the author(s) will be ineligible for OAHPERD publication for a minimum of 3 years.
- Authors should contact the journal editor (Tyler Tapps) with concerns or questions regarding issues dealing with the manuscript they have submitted. Members of the journal advisory board should not be contacted regarding manuscript submission.
Physical Activity on Campus

Student Knowledge of Physical Activity on Campus

TaNiqua Ward
University of Central Oklahoma

Abstract
The purpose of this study was to examine university student’s knowledge of physical activity and to explore the relationship between knowledge of physical activity and current levels of physical activity. Knowledge of physical activity was assessed using an instrument developed by the researcher based on ACSM physical activity recommendations. Current physical activity level was assessed using the short International Physical Activity Questionnaire (IPAQ). There was not a significant relationship between the IPAQ score and knowledge of physical activity ($r = .068, p = .604$). Most students scored high on the knowledge of physical activity instrument regardless of their current level of physical activity. These results can help health educators better understand reasons for low physical activity levels among university students.

Introduction
Adults between the ages of 18-65 years should receive the American College of Sports Medicine (ACSM) recommendation for physical activity. ACSM recommends adults should participate in at least a minimum of 20-30 minutes of aerobic physical activity at least three to five days a week (Haskell et al., 2007). It is also beneficial for adults to incorporate two or three days of muscular strengthening and endurance training (Casebolt, 2009). A total of 54% of students participate in physical activity (Pinto & Marcus, 1995). Physical activity gradually declines in most adults as they age, especially in females (Butt, Weinberg, Breckon, & Claytor, 2011).

Previous studies have examined knowledge of physical activity and current physical activity levels of individuals; however, only a few studies indicated a significant relationship between the two components. It is important for students to know physical activity recommendations and have knowledge about the benefits of physical activity to incorporate it into their daily lives and increase physical activity participation (Bodde et al., 2012).

Bodde et al. (2012) did find a significant relationship between physical activity and knowledge. The results showed that there was a significant difference in improvement of Nutrition Activity Knowledge Scale (NAKS) scores of the experimental and control group combined (5.55% improvement, $p=0.04$). The NAKS was used to assess the participant’s knowledge of nutrition, weight loss concepts, and impact of physical activity on health. Physical activity was calculated as daily average minutes and increased by 10% in the two groups combined but was not significantly different. The Physical Activity Recommendation Assessment (PARA) was used to assess knowledge of physical activity recommendations and scores significantly improved between the two groups combined (31.67% improvement, $p<0.001$). Heinrich, Maddock, and Bauman (2011) found a significant difference when comparing knowledge of physical activity to actual behavior. Participants that were walking at the recommended levels or more ($r=0.27, p<0.001$) were more likely to think they needed more physical activity to achieve health benefits. The questions the participants answered included a variety of health and physical activity related questions. It was found that it is important to emphasize the health benefits of physical activity to increase physical activity levels. On the other hand, Keating et al. (2010) conducted a study on the difference between health-related knowledge and total physical activity. The results
showed that there was a low correlation between health-related knowledge and total physical activity ($r=0.11$) and there was a non-significant difference between health-related knowledge in levels of physical activity. Health-related fitness knowledge was assessed using a test developed by Keating and colleagues which asked questions based on nutrition, health, and weight management. Physical activity was measured using the Leisure Time Exercise Questionnaire (LTEQ), which analyzed physical activity patterns among participants. Similarly, Knox et al. (2012) used the method of a physical activity questionnaire to observe if results varied on the questionnaire pre and post aerobic physical activity intervention which incorporated 60 minutes of brisk walking and an informative physical education class. The results indicated that the physical activity questionnaire showed non-significant results post in the intervention group ($p=0.727$) and in the control group ($p=0.838$).

The purpose of this study was to examine the university student’s knowledge of physical activity and to explore the relationship between knowledge of physical activity and current levels of physical activity. The knowledge of physical activity was assessed using an instrument developed by the researcher based on ACSM guidelines as shown in Table 2. The knowledge survey included 10 true or false questions about physical activity guidelines and benefits. Current physical activity level was assessed using the short IPAQ. The results found in this study can help educators and students be more informed about physical activity and help them achieve health benefits through physical activity.

### Methodology

#### Participants

A total of 61 students from a university participated in the study. The students that volunteered to complete the survey were included in the study and no demographics were collected. Completion of the surveys implied consent to participate in the study.

#### Instruments

The study was conducted through two surveys. Knowledge of physical activity was assessed using an instrument developed by the researcher based on ACSM guidelines as shown in Table 2. The knowledge survey included 10 true or false questions about physical activity guidelines and benefits.

Current physical activity was assessed using the short International Physical Activity Questionnaire (IPAQ). The IPAQ is scored based on levels of physical activity which is indicated by metabolic equivalents (METS). The questions asked pertain to the individual’s physical activity level. Physical activity is assessed by asking how many minutes or how often does an individual participate in the activity. Categories are divided into low, moderate, and high levels based on the number of METS the individual achieved from physical activity (“Guidelines for Data,” 2005). The IPAQ survey is valid and reliable according to Booth et al. (2003) for the test-retest reliability for the short form IPAQ ($p=0.76$) and the concurrent validity for comparison between both the long and the short form IPAQ ($p=0.67$). The IPAQ was applicable for the student population because it allowed them to self-report physical activity which could be easily calculated into METS based on days and time spent doing physical activity.

#### Procedures

Surveys were distributed to every fifth person at three buildings on campus: the student union, a classroom building, and the library. The three main buildings were chosen because of the high traffic throughout the buildings and the variety of students. This allowed the surveys not to be bias toward any specific major, program, or college. One day each week one of the three buildings was chosen for distribution of surveys. The students were asked to fill out the surveys at the location and return it to the researcher. This method was chosen so that one researcher could effectively and efficiently administer the survey to a diverse group of university students.

### Statistical Analysis

Pearson’s product moment coefficient was calculated to determine the relationship between knowledge of physical activity and current physical activity level. Descriptive statistics were also calculated in order to describe the knowledge and activity behaviors of university students. Frequencies were used to analyze the knowledge of physical activity survey. The frequencies indicated which questions were most commonly answered correct and incorrect.

### Results

Descriptive statistics for the IPAQ questionnaire survey are reported in Table 1. IPAQ mean (3,146.07) and mean knowledge (9.38) scores were reported in the descriptive statistics.

The frequencies in Table 2 show the number of students that answered the questions from the knowledge survey correctly or incorrectly. All 61 students (100%) answered question four correctly which asked if physical activity
activity can improve the quality of life. The most frequently missed was question seven which asked if depression and anxiety can be increased by physical activity. Question seven was answered correctly by 51 (83.6%) students and incorrect by 10 (16.4%) students. A total of 93.8% of questions were answered correctly over time.

The Pearson’s Product Moment Correlation coefficient was used to examine the relationship between knowledge of physical activity and current physical activity levels (IPAQ score). The results indicated that there was not a significant relationship between the IPAQ score and knowledge of physical activity \((r= .068, p= .604)\). Table 2 showed that majority of the students answered questions that pertained to the knowledge of physical activity correctly resulting in high knowledge of physical activity scores regardless of IPAQ score.

### Table 1
Descriptive Statistics- International Physical Activity Questionnaire (IPAQ) score & knowledge

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPAQ</td>
<td>3,146.07</td>
<td>2,777.912</td>
<td>0</td>
<td>11730</td>
</tr>
<tr>
<td>Knowledge</td>
<td>9.38</td>
<td>1.035</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

### Table 2
Frequencies- Knowledge of physical activity survey

<table>
<thead>
<tr>
<th></th>
<th>Correct (#/%)</th>
<th>Incorrect (#/%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women should not participate in</td>
<td>57 (93.4%)</td>
<td>4 (6.6%)</td>
</tr>
<tr>
<td>resistance training.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical activity is defined as</td>
<td>56 (91.8%)</td>
<td>5 (8.2%)</td>
</tr>
<tr>
<td>movement produced by the muscles that</td>
<td></td>
<td></td>
</tr>
<tr>
<td>increase heart rate and energy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>expenditure.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The recommendation for resistance</td>
<td>58 (95.1%)</td>
<td>3 (4.9%)</td>
</tr>
<tr>
<td>training for an adult is 2-3 days/week.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical activity can improve the</td>
<td>61 (100.0%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>quality of life.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The recommendation for cardiorespiratory exercise for adults is 3-5 days/week for 20-60 minutes.</td>
<td>55 (90.2%)</td>
<td>6 (9.8%)</td>
</tr>
</tbody>
</table>

**Discussion**

The purpose of this study was to examine university student’s knowledge of physical activity and to explore the relationship between knowledge of physical activity and current levels of physical activity. Physical activity and knowledge of physical activity was shown to have no significant relationship indicated by the correlation value.

The results from this study are similar to the results of the study conducted by Knox et al. (2012) which found that there is not a relationship between knowledge of physical activity and physical activity participation. Although students have a high level on knowledge about physical activity this does not mean that they participate in high levels of physical activity. The results indicate that even those with lower levels of physical activity understand physical activity guidelines and benefits. Clearly, lack of knowledge about physical activity is not a major barrier to participation among college students.

Some of the possible limitations to this study were the self-reported physical activity values, knowledge of physical activity questions, and no demographic collection. Students supplied their perceived physical activity level and their weekly amount of physical activity. Based on the frequency results, the majority of the students were able to answer the questions correctly. The questions asked that were created by the researcher could have been too general for the students. Demographic information was not collected from the students in this study. Student demographics were not collected because that was not a primary focus of the study.
For future studies and further research demographics should be collected. The demographics collected can be used to examine students’ knowledge and physical activity levels based on sex, age, and race. This will allow an in depth observation on which students have acquired more knowledge than others about physical activity. There should be a method or an instrument to measure physical activity. The researcher would be able to have verification of the amount of physical activity each participant engages in. A larger sample size could be useful in future studies to have a better representation of university students and to compare it to other universities.

**Conclusion**

Based on this study, new methods need to be examined to encourage students to participate in physical activity. Since this study indicated that there was no relationship between knowledge and physical activity, educators should find new ways to promote physical activity on college campuses. Educators and universities can possibly examine the underlying reason why the students do not participate in physical activity in order to discover ways for students to get the recommended amount of physical activity.

**References**


Nutrition Education for Children

A Practical Method for Teaching and Assessing Nutritional Knowledge in Elementary School Children

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Abstract
Knowledge of nutrition, such as servings per day, naming fruits and vegetables, and how food gives energy, are important to learn in promoting a healthier lifestyle. Health educators should be using methods to ensure that students have knowledge of what should and should not be put into their bodies. This is important as their family may not have the education to know what their child’s nutritional needs are (Baskale & Bahar, 2011). Therefore, the purpose of this article is to present a review of school nutrition education interventions in Oklahoma before providing a two-lesson plan to educate elementary children on nutritional topics. In addition, this article provides an effective method for assessing the effectiveness of the lesson plans, which are easily integrated into other subjects such as math and reading. Lessons and assessments are provided with an explanation of how they should be used in order to determine improvement of children’s nutritional knowledge immediately following the lessons as well as long-term.

Childhood Obesity
Obesity in children in the United States is an epidemic, with approximately 32% of children and adolescents being overweight (Osborne & Forestell, 2012). Portion size increases over the last three decades (Cohen & Bhatia, 2012) in addition to over consuming high energy and low-nutrient dense food are in part contributors. Further, when individuals are presented with excess calories, they are more likely to eat more, do not eat less at other meals, and continue to calorically over consume.

Obesity is becoming more and more prevalent in America’s youth. This is problematic because obese children typically stay obese as adults, which can lead to morbid obesity (Osborne & Forestell, 2012). Side-effects of obesity can include type 2 diabetes and other metabolic risk factors (Ritchie, Raman, Sharma, Fitch, & Fleming, 2011).

Not all children are at risk of being overweight or becoming obese; the most at risk for developing obesity or being overweight are children of lower socioeconomic status (Zarnowiecki, Sinn, Petkov, & Dollman, 2011). Healthcare workers may not get the chance to see the child, due to the parent’s work schedule or finances. Dalton, Schetzina, Holt, Fulton-Robinson, Ho, Tudiver, McBee, and Wu (2011) state that healthcare providers recognize and treat less than 20% of overweight children. This is often due to time constraints which prevent the discussion on how to execute an ‘eat-less, exercise-more’ prescription and may hinder the initiation of any behavior changes (Dalton 2011). Thus, obesity statistics will continue to
Nutrition improves student self-efficacy. Thus, reported that a school-based nutritional education
bread and less fatty low-nutrient foods (Baskale & diet during childhood may have important
subjects learned early in life with evidence suggesting
important that health education includes nutrition as a core component.
How Nutrition Improves Making Healthier Decisions
Children need nutrition knowledge to make healthier food choices, and knowledge, in relation to eating and nutrition, is “defined as the understanding of the health benefits of food and nutrients” (Zarnowiecki et al., 2011, p. 1284). Nutrition knowledge is becoming increasingly important in food choices; associations shown in studies between knowledge and eating behaviors show that with nutrition knowledge, healthier eating behaviors may occur (Zarnowiecki et al., 2011). According to Osborne and Forestell (2012), “Although children understand that nutritious food contributes to a healthy body, they are generally not concerned about their health and second, children appear to believe that healthy foods are unpalatable” (p. 363). Thus, teaching children about nutrition is one of the most important subjects learned early in life with evidence suggesting that “diet during childhood may have important implications for the development of obesity and other chronic disease in later life” (Ritchie et al., 2011, p.236). If children can learn what kind of food they should be eating, they have a higher likelihood of making healthier decisions by eating more fruits, vegetables, dairy, and bread and less fatty low-nutrient foods (Baskale & Bahar, 2011). Baghurst and Eichmann (in press) recently reported that a school-based nutritional education curriculum can improve student self-efficacy. Thus, impressing upon children the importance of nutrition in their early years is paramount because they are still determining lifelong food preferences and eating habits (Zarnowiecki et al., 2011).

Nutrition Requirements in Oklahoma Schools
There are no current standards on teaching nutrition specifically in the state of Oklahoma. Although there are health standards, they do not specifically address nutrition. Standard Three states that: “The student will demonstrate the ability to practice health-enhancing behaviors and reduce health and safety risks” (Oklahoma Board of Education, 2013). This standard can be used to help address children’s’ nutritional knowledge requirements even though there are no specific standards for nutrition.

School Interventions in Nutrition Education
School health and physical education classes provide an opportunity to incorporate nutrition education into the curriculum. There are a variety of nutrition education programs that can be implemented in the schools that are easy to use and will help young students acquire healthy nutritional habits early in life (Agozzino, Del Prete, Leone, Manzi, Sansolone, & Krauss, 2007). According to Agozzino et al., “a substantial percentage of children do not demonstrate correct nutritional intake and therefore nutrition education interventions are more opportune and necessary than ever” (p. 275). However, to be successful interventions must include sharing commitment and setting health goals with the school community (Bisset, Potvin, & Daniel, 2013).

Children have the opportunity to learn how to healthily replenish their bodies through nutrition education programs in school. With society becoming busier and relying more on convenient meals (French, Story, & Jeffery, 2001), nutrition education has never been so important in schools. With over one third of the adult American population being obese (Wilson, Crosnoe, & Daniels, 2012) failing to educate children about proper nutrition will likely yield to continual deleterious consequences. Thus, the purposes of this article are to provide: a) a curriculum with two practical lessons for teachers seeking to incorporate nutritional education into their classroom, b) an example of how knowledge gained can be assessed, and c) an example of how and when these lessons can be delivered.

Curriculum and Lessons
In this example, the USDA Fresh Fruit and Vegetable Curriculum developed through the Fresh Fruit and Vegetable Program (FFVP) approved by Congress
in 2002 (2013). The program provides free and accessible fruits and vegetables to students participating in elementary schools. To enroll, the school must also be participating in the school breakfast or lunch program. This program includes a K-5 nutrition education curriculum (see http://tinyurl.com/lo4x7p3) to help seamlessly integrate nutrition education into the classroom. This article will be using the 2nd grade lesson plans, worksheets, and other materials. All are located in the curriculum, and page numbers will be provided next to anything referenced.

**Lesson Plan One**

The first lesson, “Focus on Fruits and Vary Your Veggies” (p. 99-100), integrates math to help develop fluency in addition and subtraction and to identify patterns. Included in the curriculum are several teacher resources as well as handouts that are included at the end of the lesson for homework (p. 10-14; 17; 19-38). The focus of the lesson is for students to create a list of fruits and veggies that they eat, whether it is from a garden, raw, cooked, or on a pizza. The students should also give reasons as to why it is important for them to eat many fruits and veggies every day.

There are seven key points that need to be addressed in this lesson: eating a lot of fruits and veggies every day helps us stay healthy; fruits and veggies are excellent sources of many nutrients, including vitamins A and C, potassium and fiber; vitamin A keeps eyes and skin healthy and helps to protect against infections; vitamin C helps heal cuts and wounds and keeps teeth and gums healthy; fiber keeps food moving through the digestive tract; most fruits and veggies are naturally low in fat and calories and do not contain cholesterol; and MyPyramid tells us how many fruits and veggies we need to eat every day.

The handouts in the curriculum can expand students’ knowledge on important nutrients that fruits and veggies contain. One example determines if the students can identify what type of nutrient would be in their favorite types of fruits and veggies. The “Vegetable Menu” (p. 101-102), “Boxing Fruits and Veggies” (p. 103-104), and “Which Fruit?” (p. 105-106) handouts can be provided as homework.

**Lesson Plan Two**

The second lesson, “My Fruit and Veggie Goals” (p. 107-108), integrates language arts to foster students’ use of phonic knowledge, using text for a variety of reasons, explaining things in their own words, and using oral communication. The same resources (p. 10-14; 17; 19-22; 28-38) in the curriculum, except for the MyPyramid resources (p. 23-27), can be used for this lesson also. This lesson focuses on asking students about the types of fruits and veggies they have eaten at school, which ones they liked, and why they liked them. Students are also expected to discuss ideas on how to eat more fruits and veggies outside of school and they should be reminded that eating a variety of fruits and veggies is important.

There are only two talking points for this lesson. First, set realistic and achievable goals. For example, if only corn and apple juice are what is being offered, try adding one new fruit this week. Second, take one step at a time. No one expects a complete change in eating habits to happen overnight. Therefore, the student should be encouraged to try making one new, positive change and then continue to make gradual changes over time.

After the lesson is completed, students should be given the handouts: “My Fruit and Veggie Snack,” (p. 109) “Eat More Fruits and Veggies,” (p.110) and “My Fruit and Veggie Goals” (p.111) for the students to complete on their own as homework.

**Assessing Knowledge**

To determine knowledge gained, a 25 question test is provided in Appendix A. This test can be given to students both prior to and following the lessons. In addition, it is recommended that a third assessment period, several weeks later, should be conducted to determine knowledge retention.

The test requires students to identify the names of 10 different fruits and 10 different vegetables shown in pictures. Most of these fruits and veggies are ones that students may not necessarily see on a normal basis. About five of each should be common fruits and veggies that students have a higher chance of eating locally. Five questions should be matching foods to the vitamins or nutrients contained in a food. The test for this study can be found in Appendix A.

**Delivering the Lessons**

To include all three assessments during the same semester, these lessons should be delivered early in the semester. The three tests should not vary. Each test should be given in class and read aloud so that students may read along and answer the questions. The first lesson should then be taught with homework due at the beginning of the next class. The next time that the students meet, the second lesson should be taught, and similarly, homework should be due the next lesson. The second test should be completed the next time that the
students meet so that students are no relying on answers in short-term memory and have completed their second homework assignment. At least one month after, as all the tests should be given in the same semester, the test should be given a last time to see if students have retained their nutritional knowledge.

**Conclusion**

Obesity is an epidemic not just in adults, as obese children tend to remain obese into adulthood (Osborne & Forestell, 2012). Therefore, it is important that physical and health educators incorporate nutrition into their curricula (Agozzino et al., 2007). This article has provided a practical method for incorporating two lesson plans into a curriculum that provide practical nutritional knowledge. Further, an assessment has been included that can be used to determine pre and post knowledge acquired from the lessons.

**References**


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