

Student Employees and Recreational Sports Administrators: A Comparison of Perceptions

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This study evaluates the differences in perceptions between student employees and recreational sports administrators over a consistent set of work tasks and responsibilities typically done by student employees in a recreational sports setting. The focus of the study was to provide a method of improving the effectiveness and efficiency by which recreational sports programs deliver their services and programs. Nine of the 11 schools in the Big Ten Conference participated in the study with a total of eighty-five participants taking part. Concept mapping, a multivariate statistical approach using multidimensional scaling and cluster analysis was used to analyze the data. Ninety-five work tasks were sorted for similarity and rated on scales for importance toward attaining recreational sports goals and frequency of performance. Cluster maps, ladder graphs and go-to-zones were developed from the data defining the results of the analysis. Results were presented in a composite form for the nine schools participating in the study with the intent to provide comparison between individual schools and the conference composite as requested. Cluster maps illustrated the levels of importance among the six clusters, ladder graphs demonstrated the differences between the student employees and the recreational sports administrators and go-to zones broke out the individual tasks into areas of alignment, gap zones where either importance or frequency were below the mean, and a “?” zone where neither importance nor frequency rose to the mean rating on that scale. The results allow administrators now to compare, examine, and make decisions based each of the 95 work tasks in a guided manner.

Key Words: importance, frequency of job tasks

This study evaluates the differences in perceptions between student employees and recreational sports administrators over a consistent set of work tasks typically done by student employees in a recreational sports setting. Jointly, the Division of Campus Recreation at the University of Illinois, Urbana-Champaign and the Office of Assessment and Program Services in Student Affairs (APSSA) initiated this study to determine if differences in perception existed between student employees and recreational sports administrators in the universities within the Big Ten Conference.

With a conviction that exploration of the degree of differences between the perceptions of student employees and those of their respective recreational sports

administrators could improve both the effectiveness and the efficiency of recreational sports programs within the Big Ten Conference, then the investigation of these differences would potentially improve the delivery of recreational sports opportunities to each campus community within the member institutions of the conference. It is further believed that a comparison between individual campuses against the aggregate data of the entire group could provide additional insight into where particular campuses stand with regard to their peer institutions.

The motivation for conducting this study was threefold: (1) to identify a commonly agreed upon set of work tasks that are typically done by student employees working in a recreational sports setting; (2) to determine if differences in perception between student employees and recreational sports administrators on the importance and frequency of performance of these work tasks existed; and (3) to provide a basis for comparison between individual institutions and the aggregate data of all Big Ten schools as well as comparisons between individual institutions.

Purpose

Recreational sports administrators in higher education often ask the question, “Are we on the same page with our student employees?” This study attempts to establish benchmarks of student employee tasks and responsibilities in Big Ten recreational sports programs to compare the degree of consensus between student employees and administrators on what needs or ought to be done and on what the perceived priorities in recreational sports programs are. Concept mapping, a structured conceptualization process that combines group process activities with multivariate analytical techniques to produce a visual representation of a group’s thinking, was employed to describe, articulate, and establish student employee work tasks and responsibilities and to determine priorities.

Focus of Study

The primary interest for this study was to determine if differences in perceptions between student employees and recreational sports administrators existed and if these differences could provide recreational sports programs with a method of improving the effectiveness and efficiency by which these programs delivered their services and programs to their respective constituencies. If these differences existed, how could they be exploited to improve the performance of recreational sports programs in the Big Ten Conference? A secondary focus was to provide institutions with the capacity to compare their recreational sports organization with aggregate data from all the participating institutions and to allow comparison between any two institutions participating in the study.

Participants

Each recreational sports program within the Big Ten Conference was asked to identify five student employees and five recreational sports administrators to serve as participants in the study. Efforts were made to ensure that these students and administrators represented different work areas within their recreational sports

program, and that they were representative of their institution’s student and professional employee work force with regards to ethnicity and gender. Efforts were also made to ensure that each participant had been employed by their institution for at least one academic year and that each participant was currently employed by their respective institution.

Eighty-five student employees and recreational sports administrators participated in this study. The breakdown of these eighty-five participants is shown in Table 1 below.

Table 1 Student and Professional Employee Demographics

Iowa, <i>n</i> = 10	Sophomore, <i>n</i> = 9	Director, <i>n</i> = 2
Wisconsin, <i>n</i> = 10	Junior, <i>n</i> = 10	Associate Director, <i>n</i> = 5
Minnesota, <i>n</i> = 10	Senior, <i>n</i> = 19	Assistant Director, <i>n</i> = 33
Michigan State, <i>n</i> = 10	5th year, <i>n</i> = 6	Male, <i>n</i> = 32
Michigan, <i>n</i> = 8	Freshman, <i>n</i> = 1	Female, <i>n</i> = 53
Ohio State, <i>n</i> = 7	< 1 year, <i>n</i> = 2	Administration, <i>n</i> = 40
Purdue, <i>n</i> = 10	1-2 years, <i>n</i> = 14	Student, <i>n</i> = 45
Northwestern, <i>n</i> = 10	2-3 years, <i>n</i> = 15	
Illinois, <i>n</i> = 10	3-4 years, <i>n</i> = 11	
Total, <i>n</i> = 85	4-5 years, <i>n</i> = 3	

Methodology

In concept mapping, a multivariate statistical approach using multidimensional scaling and cluster analysis, ideas are described and the interrelationships between them are articulated. The concepts and the interrelationships are then represented in the form of a pictorial or visual map.

A concept map is a pictorial representation of the group’s thinking which displays all of the ideas of the group relative to the topic at hand, shows how these ideas are related to each other, and, optionally, shows which ideas are more relevant, important, and appropriate (Trochim, 1993, p. 2).

In this study, pictorial representations (concept maps) of student employee tasks and responsibilities were generated and compared to what student employees and recreational sports administrators thought about how important and how frequently these tasks were performed.

The process of concept mapping can, generally, be divided into six basic steps (Trochim, 1993, Grayson, 1992). These steps were used in this study and are described below.

Step 1: Preparation

Preparation included developing a focus statement for brainstorming work tasks and responsibilities, developing rating scales to measure the relative importance and

frequency of performance of the work tasks, setting the timeline for the conduct of the concept mapping activities, and selecting participants. Activities included:

- “focus statement” was developed for use in the brainstorming session and two rating scales were also developed for administration in Step 4. One scale was used to rate *the relative importance of each job task* identified in the brainstorming session, and the other was used to rate *the extent to which each identified job task was being performed*. These rating scales were administered during Step 4.
- timeline for the conduct of the activity associated with the study was developed and instructions were prepared for each campus.

The concept and design of this study was introduced to a representative from each of the campuses of the Big Ten Conference at the Big Ten Recreational Sports Conference held at Northwestern University in May, 2004. Voluntary participation was requested from each institution and the groundwork for Step 2 was laid.

Step 2: Generation of the Ideas or Statements

The focus statement that guided the generation of ideas was “Generate statements (i.e., short phrases or sentences) that describe specific work tasks or responsibilities student employees are currently doing or have been doing or ought to be doing in their present job in recreational sports at your institution.” Each of the Big Ten Conference schools was asked to identify five student employees and five recreational sport administrators who would be engaged in brainstorming ideas relative to the work tasks performed by student employees on their respective campus. Basic brainstorming rules were followed. No censoring of other people’s ideas was allowed, every idea was addressed in the brainstorming session, and routine as well as novel ideas were included. Over 250 statements were generated by the groups from the participating schools. This list was culled to a final list of 95 distinct work statements and responsibilities. This was accomplished through examination of the lists by the authors enlisting a process of elimination of duplications and redundancies.

Step 3: Structuring of Ideas

The resulting statement list of 95 specific work tasks or responsibilities was presented to the representatives of the Big Ten schools for review and to achieve mutual understanding of each statement. The work tasks statements were then readied for “structuring” by printing them on index cards and creating a “deck of cards” with one statement on each card. Ten decks of cards were sent back to the individual campuses. Structuring these 95 statements involved each participant in a card sorting procedure to obtain information about how the statements were related to each other in terms of similarity (Weller & Romney, 1990). Individual participants, using a deck of cards with the brainstormed statements listed on them, were asked to sort the statements into groups according to similarity, in a way that made sense to them. When sorting was completed, participants labeled each of the sorts and then recorded the name of the sort on a separate sheet of paper. The identification number of each statement belonging to each sort was also recorded.

Step 4: Rating of Statements

Each participant was instructed to rate each brainstormed statement on two different dimensions: the relative importance of the work tasks to attainment of the goals of their recreational sports organization, and the extent to which student employees perform each work task. These two rating scales were developed during the preparation stage phase. As part of the computation process, ratings were averaged for each statement and were graphically displayed to demonstrate relative importance and extent of performance.

Step 5: Computation of the Maps

The Concept System, a general-purpose statistical package (Concept Systems, Inc., Ithaca, NY), which has routines for multidimensional scaling and cluster analysis as well as a graphics program to plot the final maps, was used to analyze and compute the maps, graphs, and zones. The Concept System averages the rating data and analyzes the similarity of the sorted data. Analysis of data was performed by aggregating similarity (higher values in cells indicate a higher level of agreement among participants) into a nonmetric binomial matrix, then maps are computed through multivariate procedures (multidimensional scaling [MDS] and cluster analysis) on the nonmetric matrix. See Kruskal and Wish (1978) for a detailed discussion of MDS and Aldenderfer and Blashfield (1984) for a discussion of cluster analysis. In addition to the maps, the Concept System was used to develop ladder graphs for the comparison of consensus between groups and “go-to” zones to identify specific points of alignment. Such “go-to” zones are illustrations that are generated within the program analysis to better display and identify areas for examination. Finally, averaged ratings for statements and clusters were compared.

Step 6: Interpretation and Use of the Maps, Graphs, and Go-To Zones

Interpretation of the maps, graphs, and go-to zones included the following: (a) locating the statements on the map; (b) deciding on the number of clusters; (c) describing the clusters by size, cohesiveness, location, and rating scales; (d) naming clusters; (e) viewing the map by regions; (f) viewing the map as a whole; (g) viewing ladder graphs to determine “disconnects” between groups; and (h) viewing go-to zones for alignment of specific statements of disagreement. Once meaningfulness and understanding of maps, graphs, and go-to zones were established, plans for the use of the findings were made and put into action.

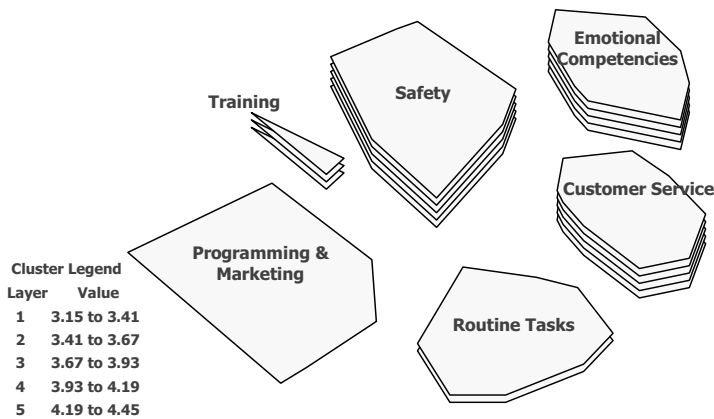
In summary, 85 student employees and recreational sports administrators from the recreational sports programs of the participating Big Ten Conference institutions generated 95 specific work tasks and responsibility statements associated with the employment of students in their respective programs. These participants rated each of the statements in terms of how important they thought the task was to attaining the goals of their organization and in terms of the extent to which they believed that task was actually performed. In addition to rating, each participant sorted all the statements into distinct piles according to their perception of the similarity of the items. Following sorting, participants were asked to label each pile or group. After the rating and sorting of statements was completed, the data was entered in

the Concept System software for statistical treatment and analysis, and computation of maps, graphs, and go-to zones.

Results

The application of concept mapping technology resulted in: (a) a six-cluster map with layering indicating the importance of the work tasks; (b) pattern matching that resulted in “ladder graphs” comparing importance and the extent of performance; and (c) “go-to zones” that identified specific work tasks with low ratings on both importance and performance ratings.

Figure 1 indicates the overall relationship of the 95 work tasks and responsibilities using a six-cluster solution. The layering of each cluster visually presents the degree of importance of the statements within that cluster. The location and proximity of clusters to each other indicate the similarity and relationship of the items within that cluster with the items within clusters surrounding it. The closer the clusters are located to each other, the stronger the relationship. For example, it can be noted that the cluster labeled, “Customer Service,” located on the right side of the map is closely surrounded by the clusters labeled “Safety,” “Emotional Competencies,” and “Routine Tasks.” From this configuration it could be argued that the core of campus recreation is providing customer service and this requires of its student employees various emotional competencies, understanding of safety and emergency response skills, and the conduct of routine tasks. In terms of importance, the map clearly shows the relative importance of “Customer Service,” “Safety,” and “Emotional Competencies” as being the highest among all the clusters. The other two clusters, located farther away from the “Customer Service” cluster, indicate important supplementary activities necessary to maintain quality customer service.



Cluster Legend: Layers indicate the relative level of importance

Figure 1 — Big Ten - A Structure of recreational operations.

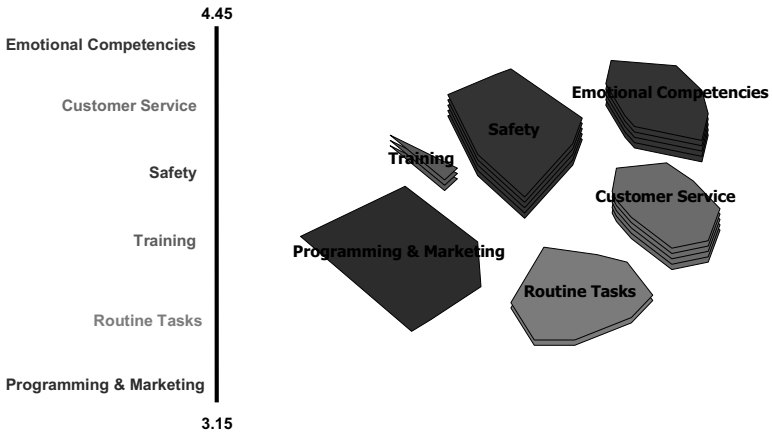


Figure 2 — Cluster Mean Values on Importance (9 of 11 Big Ten Schools).

Figure 2 indicates the mean cluster value on importance for each of the six clusters. Note the close relationship between the items within the three clusters entitled “Emotional Competencies,” “Customer Service,” and “Safety.” The most notable feature of these three clusters is their proximity to each other and the relative high layering that each cluster carries. The items within these clusters define what is considered to be the most important of the work tasks and responsibilities. The items within the remaining three clusters are rated lower on importance. However, this should not necessarily be construed to indicate that these items should be ignored or dropped.

Figure 3 represents a different picture and displays the cluster mean values on the extent of performance. As is shown, the most performed tasks and responsibilities lie within the clusters of “Emotional Competencies” and “Customer Service.” The cluster labeled “Routine Tasks” is next, followed by “Safety,” “Training,” and “Programming and Marketing.”

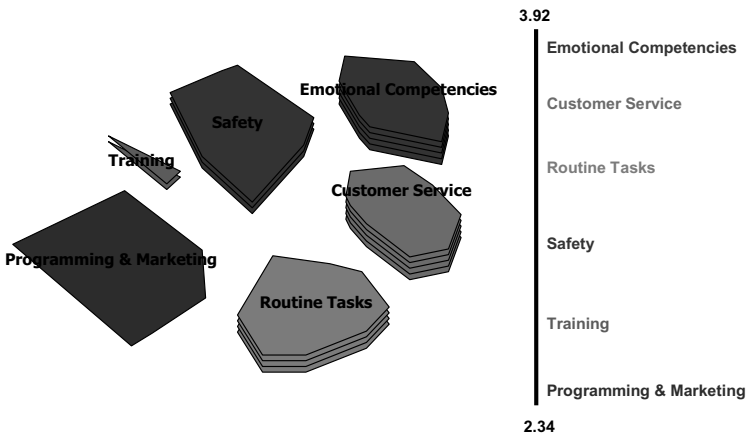


Figure 3 — Cluster Mean Values on Extent of Performance (9 Big Ten Schools).

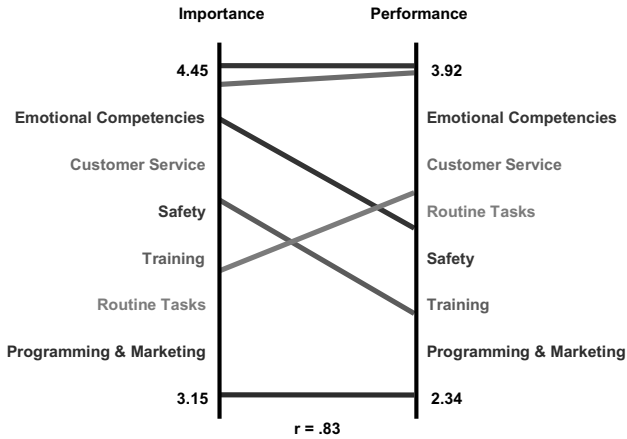


Figure 4 — Comparing Importance with Extent of Performance Composite of 9 Big Ten Schools.

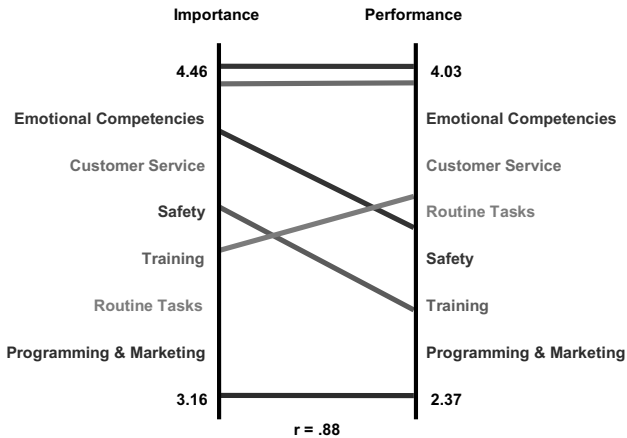


Figure 5 — Comparing Importance with Extent of Performance Students Only.

Pattern Matches

The ladder graphs generated by the concept system compare the cluster mean importance ratings with the cluster mean extent of performance ratings. These ladder graphs depict pattern matches. Figures 4, 5, and 6 illustrate the mean cluster ratings between importance and performance as rated by all participants, by students and by administrators, respectively. Note that there is a relatively high correlation between importance and performance for each comparison group. However, a disconnect exists between the mean importance rating and the mean

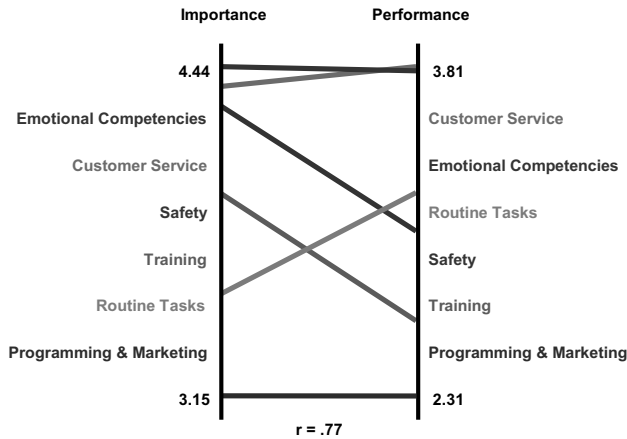


Figure 6 — Comparing Importance with Extent of Performance Administration Only.

performance rating for the “Routine Tasks” cluster. In terms of importance, “Routine Tasks” is rated second to the bottom on the ladder graphs for all three groups. Yet, the cluster is rated relatively higher in terms of the extent of performance, i.e., third from the top on each of the ladder graphs. The only other “disconnect,” where the lines of two clusters cross over each other between the two scales, is a rather minor one between the two clusters labeled “Emotional Competencies” and “Customer Service.” Administrators believed that items within the “Customer Service” cluster were being performed most frequently while student employees believed those items within the “Emotional Competencies” cluster were being most frequently performed.

Go-To Zones

Figure 7 illustrates the quadrants of a go-to zone. The location and size of the four quadrants are determined by placing the mean score of the importance rating on the vertical axis and the mean score of the extent of performance rating on the horizontal axis. The four quadrants are indicated in Figure 7. Those tasks and responsibilities within the “aligned” area are considered to be both highly important and being performed most often. Items located in either quadrant labeled “gaps” indicate that either the items are considered to be more important than frequently performed or vice versa. Finally, those items in the “?” quadrant are not considered very important and are not being frequently performed. By definition, it is impossible to have all of the items in the study fall within the “aligned” quadrant. Therefore close examination of items located within the “gaps” quadrants and the “?” quadrant is warranted to determine relevant meaning and a decision on whether to make programmatic changes that would result in moving the item to the “aligned” quadrant. When examining particular statements/items in the go-to zones, the following questions might be asked. Labels for the four zones within these illustrations are generated from program analysis.

1. Is an item located in a particular quadrant due to its nature? For example, Item #3 (see Figure 10, “Safety Cluster”) “*Deal with emergency and crisis situations (calling paramedics, giving CPR, etc.)*” is located in the “gap” quadrant that indicates it is more important and less frequently performed. Dedicating and expending resources in an effort to move this item to the “aligned” quadrant would be counterproductive.
2. Do the resources and effort required to move an item to the “aligned” quadrant justify the results? For example, Item #64 (see Figure 12, “Routine Tasks”) “*Count customers*” is located in the “gap” quadrant that indicates it is less important and more frequently performed. If one of the evaluative criteria for a recreational sports program is number of individuals served, moving this item to the “aligned” quadrant could be very important. This would be an administrative decision.
3. Is the level of importance and frequency of performance of a particular item at a level that is consistent with the philosophical direction and needs of the organization? For example, Item #22 (see Figure 8, “Customer Service”) “*Write clearly and effectively*” is located in the “?” quadrant that indicates it is less important and performed less frequently. If a recreational sports program does not feel that this item is important or structures their student employee jobs to not require this item, its location is most likely consistent with the goals of that organization. If, on the other hand, this item is considered a learning outcome for the institution or is believed to part of educating the total student, adjustments would be indicated.

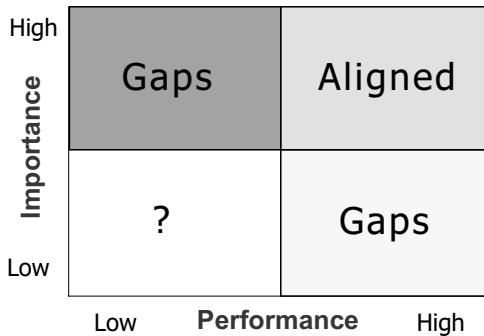
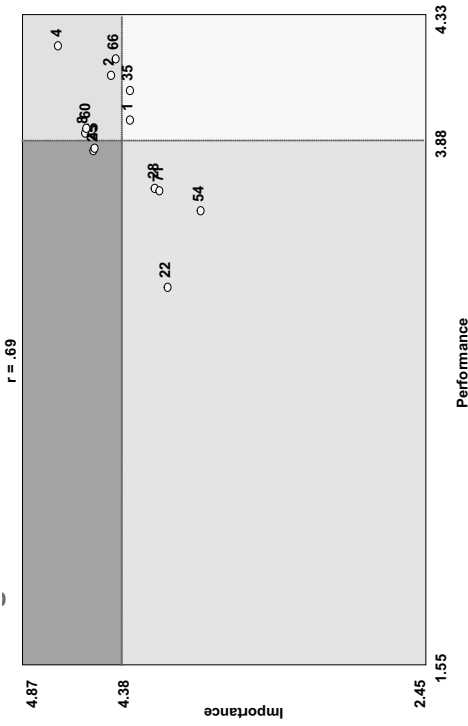


Figure 7 — Go-To Zones



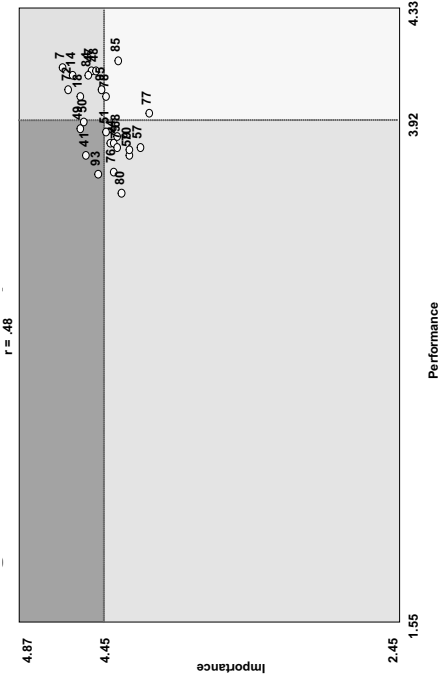
- 4. Provide customer service professionally (courteous, give directions, answer questions)
- 8. Enforce campus recreation rules and policies consistently
- 60. Inform operations supervisor of emergencies, security issues and, if necessary, obtain authority to handle certain matters
- 2. Answer phones and respond to/maintain electronic messages or inquiries
- 66. Assist professional staff as called upon or needed

- 1. Greet people at the door
- 35. Find substitutes

- 25. know and understand campus recreation policies (handbooks, manuals, mission, vision and values)
- 45. Ensure that patrons have a pleasurable experience using recreation facilities

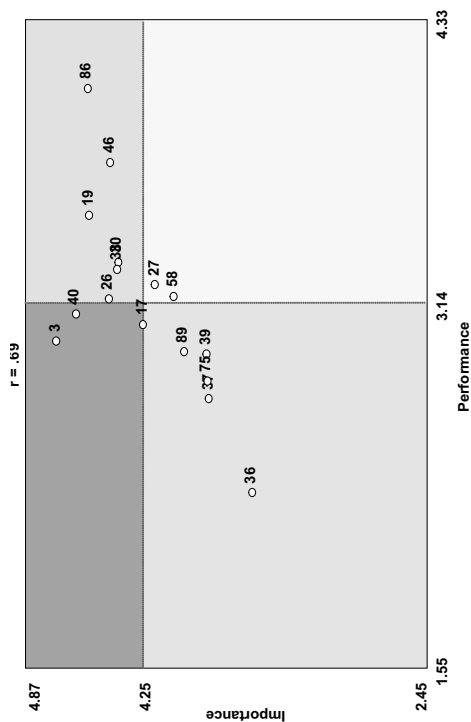
- 28. Maintain a clean working environment
- 71. Attend general staff meetings and workshops
- 22. Write clearly and effectively
- 54. Learn how to locate, organize and screen information

Figure 8 — Customer Service



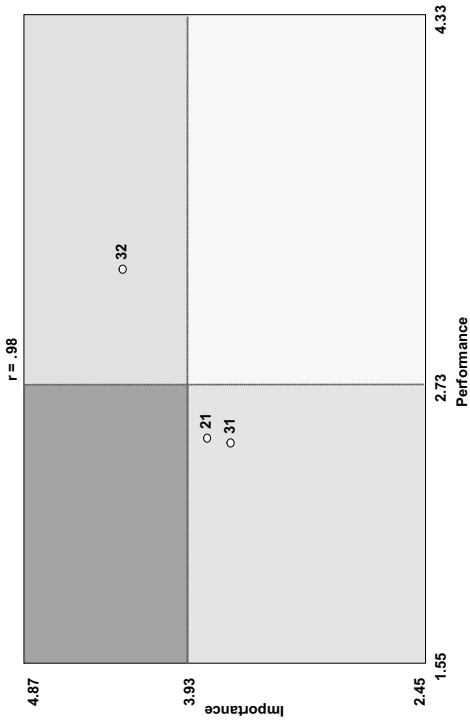
- 7. Communicate effectively with coworkers, professional staff and patrons
- 72. Conduct oneself according to standards of honesty, integrity and reliability
- 14. Conduct oneself in a professional manner based on university policy and standards
- 18. Listen attentively to others
- 84. Recognize the importance of being on time
- 47. Learn to work as a team member
- 48. Plan and manage time wisely between life, work and school
- 95. Learn to work independently of supervision
- 78. Learn and use self-control
- 85. Dress according to established standards
- 77. Learn and use individual names
- 49. Look and act professional in the work environment
- 50. Come to work with a positive attitude
- 41. Be aware and sensitive to others' needs, problems and concerns
- 93. Respect and ensure confidentiality of patrons and staff
- 51. Learn to deal with frustration
- 6. Demonstrate an understanding and appreciation for racial, religious, physical, cultural, gender and ethnic differences
- 76 Work and communicate effectively with diverse groups
- 24. Foster positive relationships through the use of interpersonal connections that generate trust and openness with staff and patrons
- 68. Learn to develop and use problem solving skills
- 79. Learn and acquire self-awareness competencies (e.g., values, attitudes, motivations, etc)
- 80. Be open and receptive to candid feedback and new perspectives
- 59. Handle multiple demands, shifting priorities and rapid changes
- 70. Learn how to keep emotions and impulses in check
- 57. Learn how to be assertive and self-sufficient

Figure 9 — Emotional Competencies.



- 86. Maintain required certifications and skills (WSI, CPR)
 - 19. Anticipate problems by being proactive and by taking preventative measures to ensure safety of patrons
 - 26. Learn and practice emergency procedures in hypothetical situations
 - 46. Ensure that programs and events run smoothly
 - 38. Make critical decisions after weighing evidence, facts and ideas
 - 30. Analyze critical situations to determine appropriate responses or actions
-
- 27. Engage in developmental training specific to work responsibilities
 - 58. Troubleshoot and delegate responsibility
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- 3. Deal with emergency and crisis situations (calling paramedics, giving CPR, etc.)
 - 40. Make accommodations for patrons and staff with special needs
 - 17. Handle disputes and disciplinary problems
-
- 89. Assume the responsibility and role of being a risk manager
 - 39. Act as role model or coach
 - 75. Suggest revisions to recreational policies, rules and regulations
 - 37. Act as a mentor
 - 36. Counsel and advise students

Figure 10 — Safety.

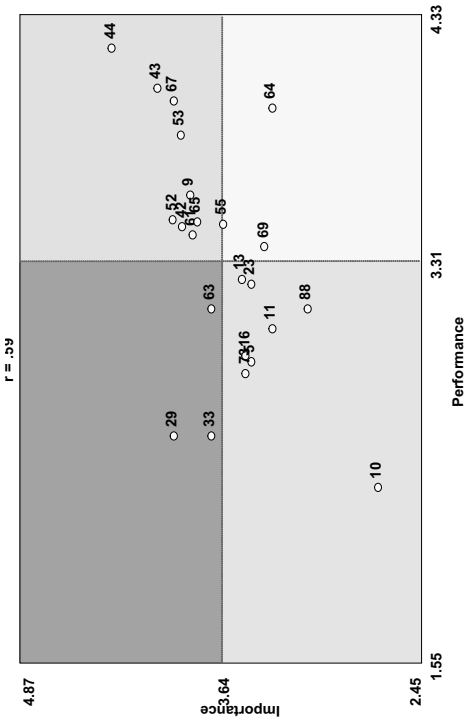


32. Train new employees

21. Motivate, encourage and educate patrons on maintaining healthy lifestyles

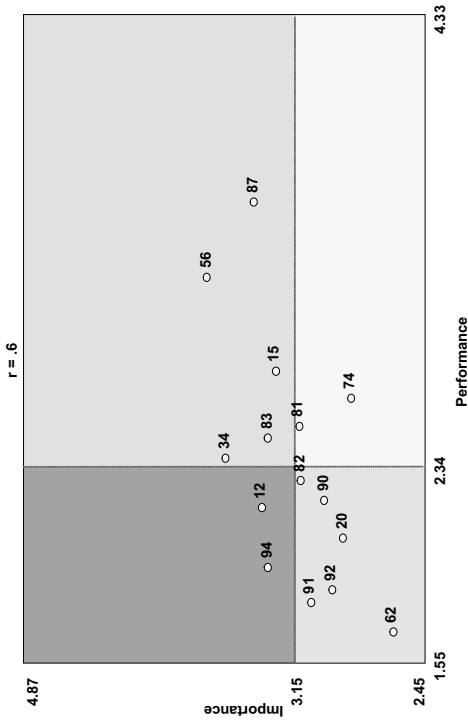
31. Evaluate performance of coworkers

Figure 11 — Training.



- 44. Open and close buildings, rooms and offices
- 43. Handle cash accounts for transactions and close out registers
- 52. Read and verify forms (space reservations, contract cancellations, registrations)
- 67. Rent or loan and check-in material, supplies and equipment
- 53. Take reservations for facilities (racquetball, volleyball), rooms and events
- 42. Register and schedule participants for various events, programs and classes
- 9. Sell campus recreation memberships
- 61. Supervise events and functions (dances, games, tournaments)
- 65. Set up and operate recreational equipment
- 55. Organize and store materials and equipment
- 69. Maintain and inventory lost and found items
- 64. Count customers
- 29. Maintain and repair damaged equipment
- 33. Call service/repair technicians and vendors and report situations and needs
- 63. Monitor spectator behavior and confiscate invalid id's and illegal substances
- 13. File paperwork (reports, invoices, purchase orders, incident reports)
- 16. Write reports (vouchers, invoices, evaluation forms, misconduct reports, space requests)
- 73. Maintain bulletin boards for publicizing/informational purposes
- 5. Conduct tours of facilities
- 23. Enter data into computer and use applicable software
- 11. Promote and sell products and services (tickets, sporting gear, food, fitness equipment)
- 88. Accept deliveries and packages
- 10. Set up multimedia equipment (sound, video, etc.)

Figure 12 — Routine Tasks.



- 56. Disseminate information on events, activities and clubs (publicizing and advertising)
 - 34. Create and post daily work schedules for student employees
 - 87. Officiate games
 - 83. Assist with marketing of programs and services
 - 15. Design individualized physical fitness programs and choreograph group exercise classes
-
- 81. Perform physical fitness assessments
 - 74. Plan social events outside the workplace
-
- 12. Plan and conduct workshops and programs on wellness and lifestyle issues
 - 94. Update and maintain campus recreation web sites
-
- 82. Create and implement student recognition boards and awards
 - 91. Approve payroll
 - 90. Provide computer technology assistance
 - 92. Solicit sponsorships
 - 20. Take people on campus recreation events (camping, skiing, horseback riding, kayaking, scuba diving, rock climbing)
 - 62. Staff metal detectors and conduct walk-through security searches

Figure 13 — Programming & Marketing.

Conclusion

In summary, the benchmarks established by this study provide guidance for the comparison of an individual program against the collective norms of the participating institutions of the Big Ten Conference. Administrators of each program can compare, examine, and make a decision on each of the 95 work tasks and responsibilities in a guided manner that allows for improvement in the efficiencies and effectiveness of their recreational sports program. The go-to zones for each of the six clusters are listed above and include all of the work tasks and responsibilities used in the study. Each go-to zone should be viewed to determine whether changes are warranted and, if so, how these changes might be brought about.

Acknowledgments

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