Learning Styles of Athletic Training Educators

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Any authors have used several types of learning-style inventories to study the learning styles of athletic training students. One of the more commonly used learning-style instruments is the Kolb Learning Style Inventory (LSI). This inventory is based on Kolb’s experiential learning model, which defines learning styles as acquired, consistent patterns of learner–environment interaction. Learning styles reflect a person’s characteristic style of acquiring and using information in learning or solving problems. It is the general prevailing theory that one’s learning style will also be one’s preferred teaching style. Thus, the way an individual learns will also primarily be the way he or she presents information in the classroom. The purpose of this investigation was to assess the learning styles of athletic training educators.

Learning-Style Types

Kolb describes a learning cycle that consists of four stages represented by four primary learning modes. The initial stage is referred to as concrete experience (affective), followed by reflective observation (perceptual). These observations are assimilated through abstract conceptualization (cognitive), leading to new implications for active experimentation (behavioral). Individual learners tend to place more emphasis on one mode of learning over the others. Ideal learning occurs, however, when the four modes are integrated, which can be done through the experiential learning cycle.

The LSI is a self-scored instrument that assesses a learner’s levels of abstract conceptualization (AC) or concrete experimentation (CE) and active experimentation (AE) or reflection observation (RO). These areas are referred to as the learner’s modes of processing information. In the Kolb model, a learning style is the product of one’s orientation on the horizontal and vertical axes of the learning cycle. When the difference in AC and CE is plotted on the vertical axis and the difference between AE and RO is plotted on the horizontal axis, one will find that they fall in one of the four quadrants, each of which is associated with a specific learning style (Figure 1).

Table 1 represents a compilation of learning-style descriptions from several authors. Rainey described the strengths of each learning style in relationship to an athletic trainer’s job as follows:

<table>
<thead>
<tr>
<th>Concrete experience</th>
<th>Reflective observation</th>
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<tbody>
<tr>
<td>Active experimentation</td>
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<tr>
<td>Accommodator (16%)</td>
<td>Diverger (8%)</td>
</tr>
<tr>
<td>Converger (39%)</td>
<td>Assimilator (37%)</td>
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Figure 1 Learning-style grid depicting the learning modes, learning styles, and percentage of athletic training educators in each quadrant.
The strength of the converger learning style is practical application of ideas and decision making, which are part of the athletic trainer’s problem solving responsibilities. The diverger learning style is the opposite of converger. Important aspects of converger are imagination and the ability to examine situations and interact with people. These skills are important in the athletic trainer’s role of diagnostician. Assimilator as a learning style focuses on ideas, concepts, and sound theory. Helping clients make meaning of their situation and traditional teaching rely on these abilities. Assimilator and accommodator are opposites. Accommodator has an orientation to doing things, implementation and risk taking. Achieving goals and the entrepreneurial component of athletic training fits this style.9

### Table 1. Kolb’s Learning Styles

<table>
<thead>
<tr>
<th>Style</th>
<th>Description</th>
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<tr>
<td>Converger</td>
<td>Convergers are best at finding practical uses for ideas and theories. They prefer one correct answer and would rather deal with technical tasks and problems rather than social and interpersonal issues. Their greatest strengths are problem solving, decision making, and the practical applications of ideas.</td>
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<tr>
<td>Diverger</td>
<td>Divergers view concrete situations from many different points of view. They have the ability to generate a wide range of ideas, would rather observe then act, and are more people oriented. Their greatest strength is their imaginative ability.</td>
</tr>
<tr>
<td>Assimilator</td>
<td>Assimilators are best at understanding a wide range of information and putting it into concise, logical form. They are more concerned with theories and concepts and less focused on people. They judge ideas more by whether they are logically sound and precise then practical. Their greatest strength is their ability to create abstract models for explaining phenomena.</td>
</tr>
<tr>
<td>Accommodator</td>
<td>Accommodators are best at doing things, in carrying out plans and tasks and getting involved in new experiences. They learn primarily by hands-on experience. They have a tendency to act on intuition (“gut feeling”) rather than on logical analysis and solve problems in a trial-and-error manner. They tend to rely on other people for information rather then on their own analytic ability. Their greatest ability is carrying out plans of action that might have been formulated by others.</td>
</tr>
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We administered the 1985 version of the Kolb LSI13 to attendees at the 1999 National Athletic Trainers’ Association Athletic Training Educators’ Conference. One hundred sixty athletic training educators from various universities and colleges around the United States transposed their LSI data to a data-collection sheet. Each participant’s preferred learning style was plotted on the learning-style grid.13 We used frequency distribution of scores to determine the percentage of subjects in each learning-style quadrant.

Collectively the participants fell in the converger learning-style quadrant but very close to the vertical axis separating the converger and assimilator quadrants (AC – CE = 12; AE – RO = 6). Figure 1 shows the percentage of educators falling in each learning-style quadrant. Seventy-six percent of the educators were predominantly convergers or assimilators. These two learning styles are associated with the abstract axis of the learning-style grid.

Based on these data, three fourths of athletic training educators in this study have learning styles that fall predominantly on the abstract axis of the learning-style grid. This finding differs from results of investigations using the LSI or LSI IIa in athletic training students. Athletic training students’ scores tend to be more equally distributed across the four learning-style quadrants (G.L.H., D.L-D., M.M., unpublished data, and Stradley et al.5). The ratio between active and reflective learning modes is about 50% for both the educators and students (G.L.H., D.L-D., M.M., unpublished data, and Stradley et al.5). Brower and colleagues1 reported student learning mode and style percentages that differ from our findings (G.L.H., D.L-D., M.M., unpublished data) and those of Stradley et al.5 This might be explained by the lower number of participants included in that study (Table 2).
Discussion

There is evidence to support the idea that learning styles often reflect the special needs and learning demands of a profession.6 The learning styles of a profession’s membership are often linked to the characteristics of that profession. Romprogus14 suggests that students often have general learning styles and then tend to migrate toward a specific learning style because of the influence of socialization and training of their chosen profession. The job skills required to be a university professor could be one plausible explanation for the migration of three fourths of this population to the abstract side of the learning grid.

The natural inclination is to teach how you learn best, and this can be an obstacle for student learning.7,8 If athletic training educators are following this tendency in presenting information in the classroom, chances are strong that they are not teaching the way their students learn best. In addition, the primary premise behind the Kolb learning-style model is that learning occurs best when all four learning modes are integrated through the experiential learning cycle. With an awareness of their own learning styles, athletic training educators can make a conscious effort to include instructional methodologies that will also appeal to other learning styles.

References


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