Learning Anatomy Of Nursing And Medical Students

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Abstract

The purpose of study is to determine the learning style preferences of nursing and medical students. Study sample included 221 nursing and medical students who study in prep and first class at a private university in Gaziantep. Study was realized with 193 students who were volunteer to participate in research. Data were collected by using “Information Form” and “How I Learn Inventory”. Results present that students have mainly Type I and Type IV learning styles; nursing students have mainly Type I (Spesific Sequential) and medical students have mainly Type IV (Spesific Simultaneous) learning style. According to the results, nursing students have well developed ability to derive information through direct, hand on experience; medical students have an experimental attitude and they need innovation and creativity in teaching-learning process. It can be suggested that faculty members consider learning styles and structure learning and teaching environments through these styles.

1. Main text

Populations of students entering higher education and health care professions are from diverse backgrounds and experiences (Coker & Pedersen, 2004; Manols et al., 2013). So, learning must be performed in accordance with the each students’ individual characteristics and differences, learning speed and learning styles (Ekici, 2003).

In the literature, it is emphasized to bring about positive change in behavior, students’ learning styles must be determined and organized appropriate learning experiences (Senyuva, 2009). Learning style is a major consideration in planning for effective and efficient teaching and learning process (Ekici, 2003; French et al., 2007; Li et al., 2014). Learning styles are preferred ways of acquiring knowledge and drawing conclusions (Savvas et al., 2001). Learners have their preferred ways of perceiving, organizing and retaining information that are distinct and

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consistent (Chou & Wang, 2000; Hsu, 1999). The learning style emerges as the product of the individual's personality, socio-cultural and educational experience. Apart from the personal ability and intelligence, learning styles is not to say one is better than the other (French, 2007; Seven et al., 2012). A person's learning style, although there is no change in a short time, can change as qualitative because of growth, development, maturation and differentiation of environmental stimuli (Cuthbert, 2005; Zamanzadeh et al., 2008).

Identifying students’ learning styles enables educators to strengthen non-preferred learning styles and provide effective learning experiences based on preferred learning styles (French et al., 2007). The best way to assist students is to create a harmonious learning environment, and to use teaching methods that are closely matched to the students’ preferred learning styles (Dart et al., 2000; Li et al., 2014). Consequently, individuals favor particular methods of interacting with, taking in, and processing stimuli and information when they learn (Sirin & Guzel, 2006).

The first systematic studies related how students like to learn were realized in 1960 by Rita Dunn and until today have been developed and identified by many scientists and educators. Rita Dunn described learning style as "each students’ unique ways in preparing to learning new and difficult information, learning and remembering" (Dunn, 1984, p. 12). According to Kolb (2000), learning style is shaped through personality traits, genetics, life experiences, existing conditions and people's nervous system. According to Lemire (2001), learning style is an interaction of biological and social factors. Lemire (2001), has developed "How I Learn Inventory", unlike the commonly used learning style inventories, including a dimension on students' creativity, preferred based on four dimensions and based on Gregorec and Butler, Piaget, Kolb, Herr and Cramer, Wechsler, Nicholson and Alcorn, Sternberg, Lerner and Lerner (Dogan & Cermik, 2012; Lemire, 2001).

Type I: specific order (Lemire)
  tangible order (Gregorec-Butler)

Type IV: specific concurrent (Lemire)
  tangible random (Gregorec-Butler)
  linear
  tangible (Piaget)
  tangible (Kolb)

tangible order (Gregorec-Butler)

Type II: public order (Lemire)
  intangible order (Gregorec-Butler)
  formal (Piaget)
  intangible (Piaget)
  tangible (Kolb)
  intangible (Nicholson&Alcorn)

Type III: general concurrent (Lemire)
  intangible random (Gregorec-Butler)
  spherical (Herr and Cramer, Wechsler, Nicholson and Alcorn,
  Sternberg, Lerner and Lerner)

Rapidly changing and evolving health care system, the community's complex health care needs and ever increasing knowledge obligate that nursing education strategies and methods must be based on holistic approach, students must be thinking, creator, producer, problem solver, enactor and have cognitive, affective, and psychomotor proficiency and also, effective learning methods must be selected to provide experiential learning in the teaching-learning environment. This requirement presents that in restructuring education programme which will enrich students’ view of life, determining students' learning styles and considering these styles is very important (Kaya & Akcin, 2002; Seven et al., 2012; Tasocak, 2001).

Considering the studies realized in our country is usually determined using the inventory Kolb learning styles and also, there is an extensive body of literature/research on learning styles in foreign countries than our country (Cayci & Unal, 2007, Ekici, 2013; French et al., 2007; Gurpinar et al., 2011; Seven et al., 2012; Senyuva, 2009). So, in this study, it was aimed to use “How I Learn Inventory” developed by Lemire (2001) which is different other commonly used learning style inventories, including a dimension related to students’ creativity, based on four dimensions.

In the light of these explanations, the purpose of this study was to explore the learning style preferences of nursing and medical students, create resource for constructing education programme.
2. Methods

2.1.1. Setting and Sample

Research was realized at a private university in Gaziantep on 2013-2014 academic year spring semester. Target population of the study included 221 nursing and medical students who enrolled in prep and first class, and the study sample included 193 students who were volunteer to participate in research.

2.1.2. Instruments

Data were collected by using “Information Form” and “How I Learn Inventory”.

* Information Form: Used to determine students’ socio-demographic characteristics.
* How I Learn Inventory: Used to collect data about students’ learning style. This scale has been developed in 2001 by Lemire to determine the learning style of students. Validity and reliability made in 2012 by Dogan and Cermik, and Cronbach's alpha values were found for type I .67, for type II .72, for type III .60, and for type IV .79 (Dogan & Cermik, 2012; Lemire, 2001). In this study, cronbach alpha values were found for type I .67, for type II .68, for type III .62 and for type IV .72.

Inventory is an evaluation of learning style which defined by different researchers based on four dimensions as type I, II, III, IV. This is mentioned model-based four learning styles. They are (Lemire, 2001);

- Type I (specific order); individuals who are capable of obtaining information by doing and directly,
- Type II (public order); individuals who come to the fore with excellent decoding capability in written and verbal symbols, and have many conceptual images in their minds against what they read, hear, and saw,
- Type III (general concurrent); individuals who need to interact with others as part of the learning process and learners in the best group,
- Type IV (specific concurrent); individuals who express the need to be creative in teaching and learning, have experiential attitude, innovative ones.

Type I includes questions 1,2,3,4,5,6,7; Type II includes questions 8,9,10,11,12,13; Type III includes questions 14,15,16,17,18,19 and Type IV includes questions 20,21,22,23,24,25,26.

2.1.3. Ethical Consideration

Data were collected after getting permission from related institution and ethical committee. Students were informed of the purpose and procedure of the study. Oral and written consents were obtained from the informants.

2.1.4. Data Analysis

Data were analyzed by using SPSS packet programme. Frequency-percentage, mean, standard deviation, independent sample t-test, One Way ANOVA (Ozdamar, 2001).

2.2. Findings

53.9% of the students were enrolled nursing, 46.1% of the students were enrolled medical faculty. 71.5% of the students studied at prep class, 28.5% studied at first class. Their ages vary between 17 and 22, while the average of age was 19.09±.90. 67.9% of the students were female, and 32.1% were male. 44.6% of the students were graduated from Anatolian high school, and 39.3% were graduated from general high school.

| Table 1. Point Average of Students’ Learning Style Concerning Dimensions |
|-----------------|------------------|-----------------|
| N               | X±SD             |
| Type I          | 193              | 33.83±5.45      |
| Type II         | 193              | 26.21±5.75      |
It's been pointed out that students have the highest average in type I (33.83±5.45) (Specific Sequential) and then type IV (33.58±5.37) (Specific Simultaneous).

Table 2. Comparison of Learning Style Concerning Dimensions According to Students’ Characteristics (N:193)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n</th>
<th>Dimensions of How I Learn Inventory</th>
<th>X±SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Type I</td>
<td></td>
</tr>
<tr>
<td>Department</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing</td>
<td>104</td>
<td>35.76±4.34</td>
<td></td>
</tr>
<tr>
<td>Medical</td>
<td>89</td>
<td>31.58±5.76</td>
<td></td>
</tr>
<tr>
<td>Class</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prep class</td>
<td>138</td>
<td>33.14±5.79</td>
<td></td>
</tr>
<tr>
<td>First class</td>
<td>55</td>
<td>35.58±4.02</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>131</td>
<td>34.77±5.03</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>62</td>
<td>31.85±5.80</td>
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<td>Graduate of Educational Programme</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anatolian High School</td>
<td>86</td>
<td>32.82±5.70</td>
<td></td>
</tr>
<tr>
<td>Science High School</td>
<td>16</td>
<td>29.25±5.43</td>
<td></td>
</tr>
<tr>
<td>General High School</td>
<td>91</td>
<td>35.60±4.46</td>
<td></td>
</tr>
<tr>
<td>F: 13.466</td>
<td></td>
<td>F: 1.537</td>
<td></td>
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<tr>
<td>p: 0.000*</td>
<td></td>
<td>p: 0.021</td>
<td></td>
</tr>
</tbody>
</table>

As shown in Table 2, when the dimensions of How I Learn Inventory were examined according to the department; in nursing, the highest average was among type I (35.76±4.34), in medical, the highest average was among type IV (32.83±5.81). There was statistically significant difference between the average of type I and type III according to the department (p≤0.05).

When the dimensions of How I Learn Inventory were examined according to the class; at prep class, the highest average was among type IV (33.42±5.71), at first class, the highest average was among type I (35.58±4.02). There was statistically significant difference between the average of type I and type III according to the class (p≤0.05).

When the dimensions of How I Learn Inventory were examined according to the gender; for female, the highest average was among type I (34.77±5.03), for male, the highest average was among type IV (33.38±5.33). There was statistically significant difference between the average of type I according to the gender (p≤0.05).

When the dimensions of How I Learn Inventory were examined according to the graduate of educational programme; at Anatolian high school, the highest average was among type IV (33.06±5.77), at science high school, the highest average was among type IV (33.50±5.91), at general high school, the highest average was among type I (35.60±4.46). There was statistically significant difference between the average of type I and type III according to the graduate of educational programme (p≤0.05).
Majority of the students constituting the research group are female and their ages vary between 17 and 22. Most of them studied at prep class and graduated from Anatolian High School. The results should be interpreted with caution because of the study limitations.

Today, when education discussed with modern approaches, especially in higher education, it is a reality that learning is not educator centered, not based on memorization and not realized with a pedagogical approach. Therefore, it is accepted that the learners’ active participation to the teaching-learning process, being motivated and taking responsibility is considered to be important in this process. In the light of this information, the learners will be individuals who are curious, have rich experiences and take responsibility in the decisions related to themselves (Ekici, 2013; Kaya & Akcin, 2002; Seven et al., 2012).

According to the results, majority of the students have the highest average type I and type IV learning style. This results show that the students prefer to get the knowledge by doing-living and state being creative in teaching-learning process (Lemire, 2001). When the nursing is considered as a profession that consist of science and art, it is seen that these results are parallel with the nature of profession. For nursing education it is important that doing-living and being creative is most important in terms of learning and realizing psychomotor and affective skills (Isik & Kaya, 2013; Ponto et al., 2014). Because, many studies present that the learners’ success/learning level is closely related with education programme which is prepared through the learning style (Bilgin & Durmus, 2003; Caglayan & Tasgin, 2008; Ekici, 2013; Gurpinar et al., 2011; Ponto et al., 2014; Seven et al., 2012; Suliman, 2010; Zhang & Lambert, 2008).

The other result in this study is that, nursing students have the highest average in type I and type III learning style than medical students. This result is parallel with the study done by Zamzadeh et al. (2008). When considered in terms of type I; this result can be interpreted by the content and so, difference of education programme. In nursing, the students encounter the courses related with psychomotor skills and hospital/clinical practice at first class distinctively from medical education. In medical education, students encounter courses focused psychomotor skills and clinical practices at fourth-grade. So, to get the knowledge, skill and attitude by doing-living is most important for nursing students. When considered in terms of type III; in nursing education, learning with interaction in group, taking responsibility and teamwork has a vital role. Also, as a teaching method group working is used frequently. At the same time, in nursing education, it is always taught that health professions should work together because they are essential part of health care team (Ponto et al., 2014; Seven et al., 2012; Tasocak, 2001).

In this study, the students who study at first class have the highest average in type I and type III learning style than students who study at prep class. This result interpreted that students at prep class, have only English courses. So, they don't meet any professional education/content.

In terms of gender, the females have the highest average in type I learning style than males. Learning is impressed of heritage and environmental factors. So, this result can be interpreted through hereditary features and also, owned learning style affects the learning abilities. In the literature, there are many studies that indicate gender is effective and not effective on learning style. This situation can be interpreted that there are lots of different theoretical explanations and accordingly lots of measurement surveys were developed about learning style.

The other result in this study is that, students graduated from general high school have the highest average in type I and type III learning style than Anatolian and science high school. In recent years, by the light of scientific and technological changings, high school curriculum was reconstructed. So, this result made us think that at general high school, the courses consist of focus of curriculum that give students doing-living possibilities, active learning experiments and interactive group working.

Consequently, different courses should have different designs, training plans, flexible leadership among educators, choice of teaching materials, and various tutoring methods for matching each student group. However, this can only be realized through greater awareness among university educators. In other words, university education can take advantage of learning style assessment as a platform for both educators in their educational planning, and teaching students' lifelong learning (Bostrom & Hallin, 2013).

The findings from this study may benefit learning and academic support to undergraduate health care practitioners. As a result, in teaching-learning process, students’ individual characteristics are more important than socio-demographic characteristics. There is a learning environment that each student can be successful. So, students for their department, must take responsibility for understanding their specific learning style as well as training and developing effective learning strategies.
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References


