AUTHOR INSTRUCTIONS

Introduction
The Journal is devoted to providing a forum for communication of relevant information for pharmacy and interprofessional educators and all others interested in the advancement of pharmacy education. To be considered for publication, manuscripts must relate to pharmacy education and provide useful information for the national or international audience of the Journal. If a submission has only local or regional relevance, its usefulness to the majority of readers is limited and, thus, will not be accepted. To ensure that only accurate and substantive articles are included, all manuscripts undergo a blinded peer review process and editorial approval prior to acceptance.

Research Standards
For all manuscripts reporting on research involving human subjects, the author must upload to Editorial Manager all relevant institutional review board (IRB) letters, which should indicate the research has been reviewed and approved by the appropriate human research or ethics review committee, or that it has been exempted from such review. For research that has undergone such review and approval, a statement to that effect also should be included in the manuscript methods section. All survey research must meet criteria established by the Journal’s Editorial Board. Please refer to the following publications for guidelines:


Stylistic Considerations
Style specifications for the Journal must be followed. Below are general guidelines for manuscript format and style. If in doubt about style, authors should refer to the American Medical Association (AMA) Manual of Style or consult a recent issue of the Journal.

Text. Manuscripts must be double spaced, Times New Roman 11 font, with noncontinuous line numbering and no page breaks. The text should be scholarly, readable, clear, and concise. Standard nomenclature should be used. Unfamiliar terms and acronyms should be defined at first mention. Ad hoc abbreviations should be avoided. Manuscripts that were prepared for oral presentation must be rewritten for print. Excessively long introduction or discussion sections in research papers are discouraged.

Word Style. Consult a current edition of Webster’s dictionary for guidance on spelling, compounding, and word separation. Foreign words, not in general use, should be italicized. For
proper use of chemical and biochemical terms, mathematical equations, mathematical expressions, special symbols, subscripts, superscripts, or Greek letters, please refer to the AMA Manual of Style.

**Capitalization.** When the word “journal” is capitalized and italicized as Journal, it can refer only to the American Journal of Pharmaceutical Education. In scientific writing, always capitalize the following: major words in titles and headings of manuscripts, designators for tables, figures, and appendices (eg, Appendix 1), eponyms (but not the noun that follows them, eg, Gram stain, Babinski sign), names of tests (eg, Beck Depression Inventory), genus names of organisms (but not the name of species, varieties or subspecies), acts of legislation (eg, Medicare), awards (eg, Nobel Prize), proprietary names (eg, Xerox copier), the title of a person when followed by the person’s name (eg, Chair John W. Jones), official names of organizations and institutions (eg, Centers for Disease Control and Prevention), geographic places (eg, United States of America), sociocultural designations (eg, Republicans, French people), and historical events (eg, Vietnam War).

**Abbreviations.** In instances where repeated use of an organization or chemical name would become awkward, an official or accepted abbreviation may be substituted. The abbreviation should be placed in parentheses immediately following the first use of the name in the main body of the text.

- Abbreviations of common pharmaceutical associations or organizations do not require periods or spaces between letters (eg, AMA). Abbreviations of “eg,” and “ie,” and “et al” should not be separated by periods.
- The names of US states and countries should be spelled out when they stand alone (eg, “...pharmacists throughout the United States...”). Do not use postal abbreviations for states in the text. The abbreviation “US” may be used as a modifier only when it directly precedes the word it modifies (eg, US health policies). Otherwise, it should be spelled out. The names of all other cities, states, provinces, and countries should be spelled out when they occur within the text of the article. Refer to the AMA Manual of Style for additional rules regarding abbreviations.
- Abbreviations deemed “dangerous” or “forbidden” by the Joint Commission and/or the Institute for Safe Medication Practices should be avoided (eg, QD, SC, SQ).
  
  http://www.jointcommission.org/assets/1/18/dnu_list.pdf

**Numbers.** Numbers 0-9 should be written out in general. In statistical text, Arabic numeral can be used if appropriate. Arabic numerals should also be used with designators (eg, week 1, cohort 2). Numbers 10 and up should be written as Arabic numerals (unless they occur at the beginning of a sentence, in which case the number should be spelled out). A number containing a decimal must be styled as an Arabic number. All fractions must be written as decimal equivalents.

**Measurements.** The metric system will be used for all measurements; however, conventional units should be used instead of SI units. Do not use periods when abbreviating units of measure.

**Reference numbers.** Reference numbers cited in the text of an article should be superscript Arabic numerals placed at the end of the sentence, outside the final period or other punctuation. Reference citations should be numbered according to their order of appearance in the manuscript. Subsequent citations to the same reference must be indicated by the same number originally assigned to that reference. Do not place parentheses around reference numbers cited in text.

**Manuscript Categories**

**Reviews.** Reviews are comprehensive, well-referenced descriptive papers on teaching or research topics directly related to entry-level and graduate or postgraduate education and training or skill development. Reviews should be systematic, include all relevant data, and should not be overly
influenced by the opinions and biases of the authors. The Reviews section includes papers on the history of pharmacy education. These manuscripts should not exceed 25 double-spaced pages for all components.

**Research Articles.** Research articles describe experimental or observational investigations that used formal methods for data collection and reporting of results of studies directly related to pharmacy education. This category also includes novel methods for professional and graduate student instruction (lectures, laboratories, practice experiences, or courses), or informational manuscripts on programmatic and curriculum development (formerly the Instructional Design and Assessment category). These manuscripts should not exceed 25 double-spaced pages for all components.

**Briefs.** Research Briefs are small scale studies or pilot works of interest to others with limited outcomes data. Education Briefs describe new and creative approaches to teaching and learning, curriculum, or evaluation that are of interest to others in the field, with limited assessment measures or outcomes data. The concept should be timely and significant. Peer review and IRB approval are required for both categories of briefs. Briefs should not exceed 4 double-spaced pages for all components.

**Commentaries.** These manuscripts are descriptive and intended to stimulate reflection and dialogue about issues in pharmacy education (includes previous categories of Statements, Special Articles, and Viewpoints). Manuscripts in this category are subject to peer and/or editorial review. Authors may request editorial consideration of a proposed commentary by submitting to the Journal editor for approval a one paragraph brief describing the proposed paper. Contact the editorial offices of AJPE for more information. Commentaries can vary in length from 3-12 double-spaced pages and must be properly cited.

**Letters to the Editor.** Letters to the Editor serve as a forum for the expression of ideas or for commenting on matters of interest relevant to previously published articles in the Journal. It is also an avenue for critiquing or expanding on the information presented in a previously published manuscript. Authors are required to identify themselves. The Editor reserves the right to reject, shorten, excerpt, or edit letters for publication.

**Manuscript Organization**

When submitting a manuscript in Editorial Manager, the manuscript document (a Microsoft Word file) should be arranged in the following order starting with a new page for each section: title page, abstract, text, references, tables, figures, and appendices. Editorial Manager allows authors to upload files with tables, figures, and appendices separately if that is more convenient. This is highly recommended for image files (ie, figures). This arrangement does not apply to Letters and invited commentaries.

**Title Page.** The title page should include the following information: author names, credentials, title, institution, e-mail, phone number, keywords (up to 5), total number of manuscript pages, total number of tables, and total number of figures. Please include any financial disclosures (if none, specify none), and any conflicts (if none, specify none).

**Abstract.** For Research articles, the abstract should include a brief statement (1-3 sentences) for each of the following sections: Objective, Methods, Results, and Conclusions. Abstract headers should match manuscript headers, with one subheading maximum allowed per section. For Reviews and Briefs, the abstract should include a statement for each of the following sections: Objectives, Findings, and Summary. Abstracts for these manuscripts must not exceed 250 words. For
commentaries, authors should include an unstructured abstract in paragraph form that does not exceed 150 words. Abstracts are not required for Commentaries or Letters to the Editor.  

**Manuscript Headings.** These should mirror abstract headings, with the addition of Introduction and Discussion sections and one allowable subheading per section.  

**Page Numbering.** Beginning with the title page, manuscripts should include page numbering in the upper right hand corner.  

**Main Body of Text.**  

- **Introduction:** should provide the context for the article, the objective of the study, and should state the hypothesis or research question, how and why the hypothesis was developed, and why it is important. It should generally not exceed 2 to 3 paragraphs.

- **Methods:** should include: (1) study design or type of analysis and dates/period of study; (2) details of sample (eg, participants and setting from which they were drawn, inclusion/exclusion criteria); (3) outcome measures or observations; and (4) statistical analysis. Methods sections should be written in the past tense voice.

- **Results:** should be specific and relevant to the research hypothesis. Characteristics of the study participants should be followed by presentation of results. This section should NOT include implications or weaknesses of the study, but should include validation measures if conducted as part of the study. Results should not discuss the rationale for the statistical procedures used. Data in tables and figures should NOT be duplicated in the text. For a detailed description of data presentation, see Appendix 1 below.

- **Discussion:** should be a formal consideration and critical examination of the study. The research question or hypothesis should be addressed. Results should be compared or contrasted to those of other studies. Limitations and generalizability of the results should be discussed, as well as mention of unexpected findings with suggested explanations. Type of future studies needed, if appropriate, should be mentioned.

- **Conclusions:** should include only conclusions directly supported by results, taking into account limitations. Include implications but avoid speculation and overgeneralization. Indicate whether additional study is required before the information should be used. Give equal emphasis to positive and negative findings of equal merit.  

- **General:** subheadings are acceptable in Commentaries and Reviews but should be avoided in Research papers.

- **Acknowledgments:** If listed, acknowledgments should appear after the conclusion or summary of the manuscript and explicitly state what the person being acknowledged has contributed to the manuscript. Funding/support and any other disclosures should also be included in this section.

**References.** The Journal follows the AMA Manual of Style for references. Whenever appropriate, authors should include citations relevant to the topic of the manuscript that appear in education-focused journals as well as other health professions-based publications. Excessive over-citation of articles from the Journal or reiterations of well-established historic literature should be avoided. Studies mentioned in text should be referred to with author(s)’ names (eg, “Smith and colleague’s study/review”), not with phrases such as “A recent study/review.”

Examples of references:  

Tables and Figures

**Tables.** Tables should not duplicate information provided in the text. Instead, tables should provide additional information that illustrates or expands on a specific point the author wishes to make. Each table should include a title descriptive enough to make the table self-explanatory (i.e., stand alone). Tables should not break across pages but please avoid using page breaks. Tables should be numbered using Arabic numbers following the order to which they are referred in the text. Tables should be created using Microsoft Word table formatting tools and should be in Times New Roman, 10-point type, with footnotes in 9-point type (do NOT use the tab key to form rows and columns of data as tab information is lost when the document is processed by the publisher). See Appendix 2 below for an example of table formatting style.

**Figures.** Figures should be numbered using Arabic numbers, based on the order in which they are presented in the text. Figures must be legible to readers. Large and/or high-resolution graphic image files, saved as TIFFS, should be uploaded to Editorial Manager as separate files from the manuscript text (Word file). For more detailed figure guidelines, see Appendix 3 below.

Manuscript Submission

Please submit your manuscript using AJPE’s Editorial Manager online tracking system at [http://ajpe.edmgr.com](http://ajpe.edmgr.com). Log in using your username and password and then follow the step-by-step on-screen instructions for uploading your files. If you do not know your username and password or need to
have an account created for you, please send an e-mail to ajpe@ajpe.org and a member of the editorial staff will respond as quickly as possible.

**Copyright Form.** Manuscripts submitted to the Journal should be unpublished and not under consideration elsewhere. Under the terms of the Copyright Revision Act of 1976 (Public Law 94-533), it is necessary to have the rights of the authors transferred to the publisher in order to provide for the widest possible dissemination of professional and scientific literature. The editorial office must receive this form before a manuscript can be published online. However, this form should be submitted only after acceptance of a manuscript. A link to the form will be sent to the corresponding author during the proofing stage.

**Copy Editing Stage.** Prior to publication, all manuscripts are copy edited for organization, style, and clarity. The corresponding author receives the copy edited version and is encouraged to review the paper to ensure the editing has not changed intended meaning. While minor rewording and/or alternate rewording is acceptable, all AJPE style and formatting changes made to the manuscript must be retained.

**Proofing Stage.** The corresponding author receives an e-mail with a link to an online galley proof (eProof) for review approximately 10 days prior to publication. Authors must e-mail an annotated PDF with corrections entered using Adobe Acrobat software. Extensive edits cannot be made to eProofs. The Journal allows authors two business days to return eProofs.
Appendix I. STANDARDIZATION OF STATISTICAL REPORTING

**Numeric Values**
Numbers should be rounded to reflect the precision of the instrument or measurement. Numbers that result from calculations, such as means and standard deviations, should be expressed to no more than 1 significant digit beyond the accuracy of the instrument. Thus, the mean (SD) of a quiz grade of individuals quizzes on a scale accurate to 1 point should be expressed as 62.5.

**p Values**
When possible, report the actual $p$ value ($p=0.074$) versus a threshold (eg, $p<0.01$). Very large and very small $p$ values should always be expressed as $p>.99$ and $p<.001$, respectively. $P$ values should be expressed to 2 digits to the right of the decimal point (regardless of whether the $p$ value is significant), unless $p<0.01$, in which case the $p$ value should be expressed to 3 digits to the right of the decimal point. One exception to this rule is when rounding $p$ from 3 digits to 2 digits would result in $p$ appearing nonsignificant, such as $p=.046$. In this case, expressing the $p$ value to 3 places may be preferred by the author. The smallest $p$ value that should be expressed is $p<0.001$, since additional zeros do not convey useful information. When any $p$ value is expressed, it should be clear to the reader what parameters and groups were compared, what statistical test was performed, and whether the test was 1-tailed or 2-tailed (if these distinctions are relevant for the statistical test). Because the $p$ value represents the result of a statistical test and not the strength of the association or the clinical importance of the result, $p$ values should be referred to simply as significant or not significant; terms such as highly significant and very highly significant should be avoided.

**Statistics**
The Results section should include the number of individuals or other data units initially eligible for study, the number at its inception, and the number who were excluded, dropped out, or were lost to follow-up at each point in the study. Authors should provide descriptive statistics about the sample and, if appropriate, the individual subgroups. Primary outcome measures should be discussed after the study population is described, followed by secondary outcome measures. If one statistical test has been used throughout the manuscript, the test should be clearly stated in the Methods section. If more than one statistical test has been used, the statistical tests performed should be discussed in the Methods section and the specific test used reported along with the corresponding results.

**Mean and Standard Deviation** are most clearly presented in parentheses:
The sample as a whole was relatively young ($M=19.2, SD=3.4$).
The average age of students was 19.2 years ($SD=3.4$).
In tables/figures mean and SD should be presented as: mean (SD); so, using the above example: 19.2 (3.4)

**Percentages** are also most clearly displayed in parentheses with no decimal places:
Nearly half (49%) of the sample was married.

**Chi-square** statistics are reported, the Pearson chi-square value (rounded to two decimal places), and the significance level:
The percentage of participants that were married did not differ by gender, ($c^2=0.89, p=0.35$).
t Tests are reported like chi-squares. Following that, report the t statistic (rounded to two decimal places) and the significance level. There was a significant effect for gender (p<0.001) with men receiving higher scores than women (85% vs 72%).

ANOVAstr Analysis of Variance
Both one-way and two-way are reported like the t test:
There was a significant main effect for treatment (p=0.02), and a significant interaction (p=0.04).

Correlations
Are reported with the significance level:
The two variables were strongly correlated, r=0.49, p<0.01.

Regression
Results are often best presented in a table. Results section, you should at least present the unstandardized or standardized slope (beta), whichever is more interpretable given the data, along with the t test and the corresponding significance level. It is also customary to report the percentage of variance explained along with the corresponding F test. “Social support significantly predicted depression scores, β=-.34, p<.001. Social support also explained a significant proportion of variance in depression scores, $R^2=.12, p<.001$.”

Tables
Are useful if you find that a paragraph has almost as many numbers as words. If you do use a table, do not also report the same information in the text. It's either one or the other.

Effect sizes
Are useful to term practical significant (eg, treatment effect such as Cohen’s D, regression coefficient, odds ratio). Deviations above the average performance in the “lecture” course; the question then becomes,

Significant Digits
For numerical issues, please report numbers according to or in close proximity to significant digit rules.
## Table 2. Students Identifying an Approved* or Nonapproved Indication for Medical Marijuana

<table>
<thead>
<tr>
<th>Approved Indication</th>
<th>All Students N=311 (%)</th>
<th>Marijuana Use Status</th>
<th>Professional Year</th>
<th>p value</th>
<th>P1 (%)</th>
<th>P2 (%)</th>
<th>P3 (%)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>91</td>
<td>93</td>
<td>89</td>
<td>.29</td>
<td>84</td>
<td>89</td>
<td>100</td>
<td>&lt;.001*</td>
</tr>
<tr>
<td>Glaucoma</td>
<td>57</td>
<td>70</td>
<td>49</td>
<td>&lt;.001*</td>
<td>51</td>
<td>61</td>
<td>59</td>
<td>.26</td>
</tr>
<tr>
<td>Nausea</td>
<td>46</td>
<td>57</td>
<td>39</td>
<td>.002*</td>
<td>29</td>
<td>55</td>
<td>58</td>
<td>&lt;.001*</td>
</tr>
<tr>
<td>Migraines</td>
<td>44</td>
<td>51</td>
<td>40</td>
<td>.05</td>
<td>41</td>
<td>43</td>
<td>49</td>
<td>.53</td>
</tr>
<tr>
<td>HIV</td>
<td>32</td>
<td>48</td>
<td>22</td>
<td>&lt;.001*</td>
<td>29</td>
<td>33</td>
<td>34</td>
<td>.65</td>
</tr>
<tr>
<td>Multiple Sclerosis</td>
<td>29</td>
<td>39</td>
<td>23</td>
<td>.004*</td>
<td>34</td>
<td>48</td>
<td>32</td>
<td>.03*</td>
</tr>
<tr>
<td>ALS</td>
<td>20</td>
<td>30</td>
<td>15</td>
<td>.001*</td>
<td>22</td>
<td>17</td>
<td>20</td>
<td>.67</td>
</tr>
<tr>
<td>Muscle Spasm</td>
<td>20</td>
<td>30</td>
<td>15</td>
<td>.001*</td>
<td>29</td>
<td>17</td>
<td>12</td>
<td>.008*</td>
</tr>
<tr>
<td>Crohn’s</td>
<td>20</td>
<td>26</td>
<td>16</td>
<td>.02*</td>
<td>20</td>
<td>20</td>
<td>19</td>
<td>.95</td>
</tr>
<tr>
<td>Weight Loss</td>
<td>14</td>
<td>22</td>
<td>6</td>
<td>.19</td>
<td>17</td>
<td>11</td>
<td>13</td>
<td>.39</td>
</tr>
<tr>
<td>Epilepsy</td>
<td>11</td>
<td>14</td>
<td>10</td>
<td>.25</td>
<td>14</td>
<td>11</td>
<td>8</td>
<td>.41</td>
</tr>
<tr>
<td>Huntington’s</td>
<td>11</td>
<td>11</td>
<td>10</td>
<td>.73</td>
<td>16</td>
<td>7</td>
<td>8</td>
<td>.07</td>
</tr>
<tr>
<td>Alzheimer’s</td>
<td>10</td>
<td>12</td>
<td>9</td>
<td>.30</td>
<td>15</td>
<td>8</td>
<td>6</td>
<td>.07</td>
</tr>
<tr>
<td>Hepatitis</td>
<td>5</td>
<td>9</td>
<td>3</td>
<td>.01*</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td>.39</td>
</tr>
<tr>
<td>Nonapproved Indication</td>
<td>Parkinson’s</td>
<td>19</td>
<td>27</td>
<td>15</td>
<td>28</td>
<td>15</td>
<td>11</td>
<td>.003*</td>
</tr>
<tr>
<td>Cystic Fibrosis</td>
<td>15</td>
<td>16</td>
<td>15</td>
<td>.90</td>
<td>24</td>
<td>9</td>
<td>11</td>
<td>.004*</td>
</tr>
<tr>
<td>Vertigo</td>
<td>12</td>
<td>22</td>
<td>6</td>
<td>&lt;.001*</td>
<td>12</td>
<td>14</td>
<td>9</td>
<td>.60</td>
</tr>
<tr>
<td>Tourette’s</td>
<td>10</td>
<td>17</td>
<td>6</td>
<td>.003*</td>
<td>16</td>
<td>4</td>
<td>7</td>
<td>.007*</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>6</td>
<td>10</td>
<td>4</td>
<td>.05*</td>
<td>12</td>
<td>1</td>
<td>4</td>
<td>.004*</td>
</tr>
</tbody>
</table>

* Chi-square was used to determine significance, defined as p<0.05, between previous users and never used delta-9-tetrahydrocannabinol (THC) groups and between professional years.

** P1 = first professional year; P2 = second professional year; P3 = third professional year

HIV = human immunodeficiency virus; ALS = amyotrophic lateral sclerosis

---

- **All info within table**—ie, no footnotes dangling on the bottom, put them in a row.
- **For all cells**, 10 pt Times New Roman (TNR) font size, except footnote, which is 9 pt TNR.
- **Table title** should be comprehensive enough so the table can stand alone—so no titles like: “Demographics”
Table 3. Mean Differences of Total and Subscales of the Jefferson Scale of Empathy-Health Profession Student Version (JSE-HPS) According to Demographic Factors and Pharmacy School Type (N=447)

<table>
<thead>
<tr>
<th></th>
<th>Perspective Taking</th>
<th>Compassionate Care</th>
<th>Standing in Patient’s Shoes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M (SD)</td>
<td>F</td>
<td>M (SD)</td>
<td>F</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male (n=81)</td>
<td>50.3 (6.23)</td>
<td>3.58</td>
<td>23.3 (3.25)</td>
<td>0.07</td>
</tr>
<tr>
<td>Female (n=366)</td>
<td>48.9 (5.89)</td>
<td>23.3 (2.83)</td>
<td>7.8 (2.22)</td>
<td>80.0 (8.48)</td>
</tr>
<tr>
<td><strong>Year of study</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd (n=214)</td>
<td>48.89 (5.83)</td>
<td>1.79</td>
<td>23.4 (2.76)</td>
<td>0.43</td>
</tr>
<tr>
<td>3rd (n=233)</td>
<td>49.65 (6.09)</td>
<td>23.2 (3.04)</td>
<td>7.6 (2.27)</td>
<td>80.4 (9.01)</td>
</tr>
<tr>
<td><strong>University</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (n=67)</td>
<td>46.8 (5.60)</td>
<td>22.3 (2.55)</td>
<td>8.0 (2.07)</td>
<td>77.1 (7.53)</td>
</tr>
<tr>
<td>B (n=66)</td>
<td>49.1 (6.47)</td>
<td>23.7 (2.83)</td>
<td>7.6 (2.26)</td>
<td>80.3 (8.69)</td>
</tr>
<tr>
<td>C (n=111)</td>
<td>49.1 (6.27)</td>
<td>22.9 (3.26)</td>
<td>7.8 (2.43)</td>
<td>79.8 (9.39)</td>
</tr>
<tr>
<td>D (n=79)</td>
<td>50.1 (5.92)</td>
<td>23.3 (2.81)</td>
<td>7.7 (2.15)</td>
<td>81.1 (8.84)</td>
</tr>
<tr>
<td>E (n=124)</td>
<td>50.1 (5.31)</td>
<td>23.8 (2.73)</td>
<td>7.9 (2.29)</td>
<td>81.8 (7.91)</td>
</tr>
<tr>
<td><strong>Coeducation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women’s (n=203)</td>
<td>50.1 (5.54)</td>
<td>9.10</td>
<td>23.6 (2.76)</td>
<td>5.74</td>
</tr>
<tr>
<td>Coeducational (n=244)</td>
<td>48.4 (6.21)</td>
<td>23.0 (2.99)</td>
<td>7.8 (2.29)</td>
<td>79.2 (8.78)</td>
</tr>
<tr>
<td><strong>School type</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National (n=133)</td>
<td>47.9 (6.13)</td>
<td>9.04</td>
<td>23.0 (2.77)</td>
<td>1.50</td>
</tr>
<tr>
<td>Private (n=314)</td>
<td>49.7 (5.82)</td>
<td>23.4 (2.96)</td>
<td>7.8 (2.30)</td>
<td>80.9 (8.71)</td>
</tr>
<tr>
<td>Graduate school (n=84)</td>
<td>48.6 (5.75)</td>
<td>22.6 (3.20)</td>
<td>7.7 (2.33)</td>
<td>78.9 (8.39)</td>
</tr>
<tr>
<td><strong>Future career preference</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital (n=142)</td>
<td>49.2 (6.20)</td>
<td>23.4 (2.66)</td>
<td>7.7 (2.16)</td>
<td>80.3 (8.57)</td>
</tr>
<tr>
<td>Community pharmacy (n=57)</td>
<td>49.6 (6.60)</td>
<td>23.4 (3.04)</td>
<td>8.0 (2.27)</td>
<td>81.1 (9.28)</td>
</tr>
<tr>
<td>Government service (n=60)</td>
<td>50.0 (5.33)</td>
<td>23.6 (2.66)</td>
<td>7.5 (2.31)</td>
<td>81.1 (7.78)</td>
</tr>
<tr>
<td>Pharmaceutical industry (n=54)</td>
<td>49. (5.53)</td>
<td>23.3 (2.73)</td>
<td>8.1 (2.39)</td>
<td>80.6 (8.44)</td>
</tr>
<tr>
<td>Others* (n=50)</td>
<td>48.8 (5.97)</td>
<td>23.5 (3.32)</td>
<td>8.1 (2.25)</td>
<td>80.3 (9.64)</td>
</tr>
</tbody>
</table>

* p<0.05, *p<0.01, *Others includes patent attorney, lawyers, entering medical school, etc.
Appendix III. AJPE FIGURE INSTRUCTIONS FOR AUTHORS

- Figures should contain a title and, if applicable, a legend and a key
  - Title: a succinct clause or phrase that identifies the specific topic of the figure or describes what the data show (10 pt TNR, principal words capitalized)
  - Legend: contains information that identifies and describes the figure, and it should provide sufficient detail to make the figure “stand-alone” (ie, comprehensible without reference to the text) (9 pt TNR, sentence-style capitalization)
  - Key: provides additional info to interpret the data; identifies and defines markers, shading, etc (sans-serif font consistent with the rest of the figure, sentence-style capitalization)
- Text within the figure should be in a sans-serif font such as Arial
- Axis labels should have principal words capitalized; nonaxis text should be capitalized sentence-style
- Abbreviations should be consistent with those used in text and defined in the title, legend, or key
- For graphs, do NOT include horizontal lines above the x axis and do NOT include a box around the figure
- Numbers with more than 4 digits are separated with spaces, NOT commas (ie, 300,000, instead of 300,000)
- Canvas size of figure should be at least 5” wide
- All figures should be in gray scale (or black and white), submitted electronically as high resolution (at least 300 dpi) TIFF files.
  - Note: clear, sharp images are essential for accurate reproduction—while dust and scratches can usually be removed, if the details are blurred in the original, they will be blurred in reproduction.
- Original image files for figures are preferred; if a previously published figure of any kind is necessary, the author MUST obtain and submit written permission from the copyright holder to use the figure; the original source MUST be acknowledged in the figure legend.
Author Checklist
This content is for quick reference only and is not a substitute for AJPE’s more detailed Author Instructions, which can be found here: http://www.ajpe.org/page/author-instructions

Manuscript Format
- Should not exceed 25 double-spaced pages for all components or as indicated in the instructions to authors; pages should be numbered at the bottom
- Must be submitted as a Microsoft Word document—PDFs are not acceptable
- Times New Roman, 11pt, flush left, noncontinuous line numbering, no page breaks

Article Categories
Please ensure that your manuscript fits into one of the following article categories:

Reviews
- Comprehensive, well-referenced descriptive papers on teaching or research topics related to entry-level and graduate or postgraduate education and training or skill development
- Papers on the history of pharmacy education
- Systematic, with all relevant data, not overly influenced by authors’ opinions/biases
- Should not exceed 25 double-spaced pages for all components

Research Articles
- Experimental/observational investigations using formal methods for data collection and reporting of results
- Can also present novel methods for professional/graduate student instruction or information on programmatic and curriculum development (formerly Instructional Design and Assessment)
- IRB approval/exemption included when appropriate
- Should not exceed 25 double-spaced pages for all components

Briefs
- Research Briefs: small scale studies/pilot works with limited outcomes data
- Education Briefs: new and creative approaches to teaching and learning, curriculum, or evaluation, with limited assessment measures or outcomes data
- Timely and significant
- IRB approval required for both categories
- Should not exceed 4 double-spaced pages for all components

Commentaries
- Descriptive, intended to stimulate reflection/dialogue about issues in pharmacy education (includes previous categories of Statements, Special Articles, and Viewpoints)
- Subject to peer and/or editorial review
- Properly cited
- Can vary in length from 3-12 double-spaced pages

Letters to the Editor
- Express ideas, comments, or critiques on matters of interest relevant to previously published articles in the Journal
- Authors must be identified
IRB/Ethics Committee Approval
- Institutional review board (IRB) or ethics committee letters must be included with manuscript
- Statement of IRB approval must be included in the methods section of the manuscript.

Reporting Data (follow guidelines for statistics)

Numeric Values
- Should be rounded to reflect the precision of the instrument or measurement
- Numbers that result from calculations, such as means and standard deviations, should be expressed to no more than one significant digit beyond accuracy of instrument

P Values
- When possible, report the actual $p$ value ($p=0.074$) vs a threshold (eg, $p<0.01$)
- Very large and very small $p$ values should always be expressed as $p>0.99$ and $p<0.001$, respectively

Tables, Appendices, Figure Legends
- Create tables using Microsoft Word table tools; follow guidelines for table formatting
- Use Times New Roman, 10pt., single-spaced for tables, appendices, and figure legends
- Footnotes are 9pt
- Capitalize all significant words in the titles

Manuscript Organization

Title page
- Concise working title
- Name of each author, academic degree, academic/professional affiliation and city and state where located
- Corresponding author: mailing address, telephone number, facsimile number (optional), and e-mail address

Abstract
- 150 words maximum
- Structured abstracts should contain appropriate headings (refer to Author Instructions)

Keywords
- 3-5 words keywords for the manuscript, each separated by a comma

Acknowledgments and Disclosures
- Funding/support and any other disclosures should be included in this section
- Appears after Conclusions section.

References
- References should be numbered consecutively in the order in which the referenced publication is referred to in the manuscript
- Studies mentioned in text should be referred to with author(s)' names (eg, “Smith and colleague’s study/review”), not with phrases such as “A recent study/review…”
- Refer to Author Instructions for specific reference formatting

Figures
- Black-and-white jpegs or tiffs; high resolution; follow guidelines for figures
- Submitted as separate files (not embedded in manuscript)