






Evaluation of the crosswalk between the ACPE Standards and the FIP Nanjing Statements

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Abstract

Objectives: The purpose of this study is to compare, contrast, and map the 2016 Accreditation Council for Pharmacy Education (ACPE) Standards to the 2017 International Pharmaceutical Federation (FIP) Nanjing Statements.

Methods: Three members of the Global Pharmacy Education Special Interest Group conducted a review of the ACPE Standards and Nanjing Statements to identify which Nanjing Statements mapped to the ACPE Standards, and vice versa. Two additional reviewers evaluated the results to ensure face validity.

Results: Seventy-two of the 75 Nanjing elements were mapped to 94 of the 160 ACPE elements. Nanjing Statement Clusters 2 and 6 had the highest rates of matched statements, at 83% and 94% respectively. ACPE Standards and key elements that had 100% of matches with the Nanjing Statements included Standards 3, 11, and 18.

Conclusion: These preliminary findings may help educators streamline national and global competencies. Ultimately, accrediting bodies, professional organisations, and pharmacy educators may benefit from identifying strengths and areas for improvement.

Keywords: *Nanjing Statements, Pharmacists, Pharmacy Education, Pharmacy Practice, Student Pharmacists*

Introduction

Many countries establish pharmacy education standards, requiring pharmacy schools to evaluate curriculums and provide the necessary education to meet healthcare needs, and national standards (Law *et al.*, 2019). In 2017, the Fédération Internationale Pharmaceutique/International Pharmaceutical Federation (FIP) published the Nanjing Statements on Pharmacy and Pharmaceutical Sciences (NS) (FIP, 2017). The NS describe the envisioned future for pharmacy education and a global consensus of 37 countries (FIP, 2017).

Within the United States (US), the Accreditation Council for Pharmacy Education (ACPE) sets curricular standards for pharmacy education. In 2016, ACPE updated Standards for the Doctor of Pharmacy degree programmes (ACPE, 2015). With the release of the NS, there was an interest in comparing the ACPE Standards (AP) and the NS. The main purpose of the evaluation was to compare the AP with the NS by mapping the NS to the AP.

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Methods

Select members of the American Association of Colleges of Pharmacy Global Pharmacy Education Special Interest Group (AACCP GPE SIG) conducted a review of the AP and NS. Using Excel (Microsoft Corporation, Redmond WA, 2017), three reviewers evaluated each NS and identified which AP it correlated with and vice versa. The review was conducted in phases by three reviewers (phase 1 as a group; phase 2 individually; and phase 3 as a group). Reviewers evaluated in both directions; two versions of the map were reconciled into one map interpreting the matched Statements/Standards from both perspectives.

The 67 NS are organised into eight clusters each with a number of associated Statements (together, 75 NS elements). The AP include 25 main Standards each with associated key elements (135 key elements). Together, they result in 160 ACPE elements (AE). The 75 NS elements were compared to the 160 AE. As each Nanjing element (NE) contained multiple concepts, reviewers determined either a partial or a full match. There was no limit on how many AE could be matched to a NE. In the final map, matches were assessed by number and percent of matches between the AE and the NE. A fourth and fifth reviewer evaluated the mapping results for face validity.

Results

Evaluation of Nanjing Statements (NS)

Seventy-three NE mapped to 94 AE (Table I). Three of the 75 NE remained unmapped, one from Cluster 1 (Shared Global Vision) and two from Cluster 7 (Quality Assurance) (Table II). NS Cluster 2 (Professional Skills Mix) and Cluster 6 (Resources and Academic Staff), had the largest number of fully mapped ACPE elements, each with 25 and 51, respectively (Table I). Cluster areas with the lowest numbers of matched Statement elements included Continuing Professional Development and Recruitment of Students. Cluster 6 (Resources and Academic Staff) had the greatest discrepancy of elements matched (15 NE vs 51 AE) (Figure 1). The percentage of mapped NE in each cluster ranged from 44-94%. Statements in clusters 2 and 6 had the highest percent of Statements mapped to the AE, at 83% and 94%. Cluster 5 (Experiential Education) also had 83% of statements mapped to AE (Figure 1). The cluster with the lowest percent mapped to AE was Cluster 1 (Shared Global Vision) at 44% (Figure 1).

Evaluation of ACPE Standards (AP)

In the final map, 66 of 160 (41%) AE remained unmapped to the NE. The percent of mapped AE ranged from 13–100%. Areas of focus with the largest number of unmapped elements were in Standards 8 (Organisation and Governance), 14 (Student Services), and 16 (Admissions Policies and Materials) with 8, 7,

and 6 unmapped elements, respectively. AE with the lowest percent mapped to NE included Standards 14 (Student Services) at 13%, 8 (Organisation and Governance) at 20% and 6 (College/School Mission) and 7 (Strategic Plan), each at 25% (Figure 2).

Table I: Full and partial Nanjing - ACPE matches within each Nanjing Cluster

Nanjing Cluster* (# of statements within cluster)	Full matches* (# of Nanjing elements matched to # of ACPE elements)	Partial matches* (# of Nanjing elements/# of ACPE elements)
Cluster 1: Shared Global Vision (9)	4 matched to 6	6 matched to 11
Cluster 2: Professional Skills Mix (12)	10 matched to 25	6 matched to 7
Cluster 3: Recruitment of Students (3)	2 matched to 4	3 matched to 6
Cluster 4: Foundation Training and Leadership (7)	5 matched to 7	6 matched to 12
Cluster 5: Experiential Education (12)	10 matched to 12	5 matched to 8
Cluster 6: Resources and Academic Staff (16)	15 matched to 51	7 matched to 9
Cluster 7: Quality Assurance (11)	7 matched to 20	7 matched to 16
Cluster 8: Continuing Professional Development (5)	3 matched to 3	4 matched to 6

*ACPE elements were permitted to be mapped to more than one Nanjing element, if applicable

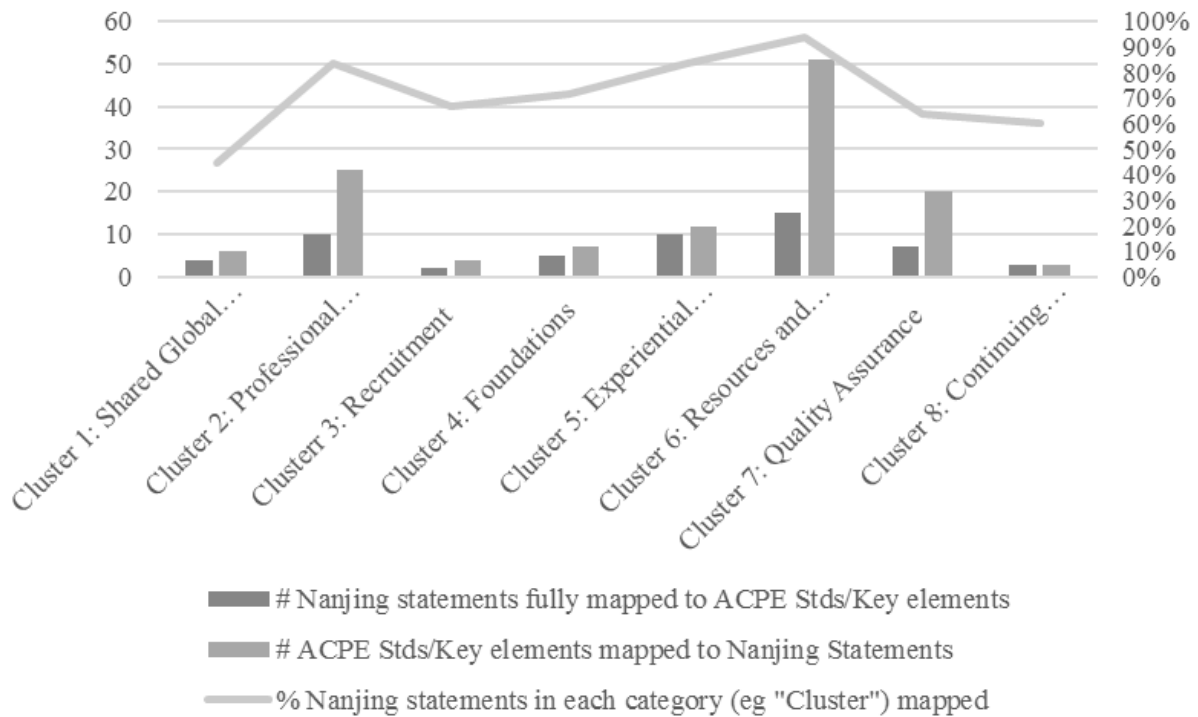
* Full matches: Matched Nanjing element and ACPE element were determined to reflect the same concepts.

* Partial matches: Matched Nanjing element and ACPE element were determined to only partially reflect the same concepts

Table II: List of Nanjing Statements that remained unmapped to ACPE Standards

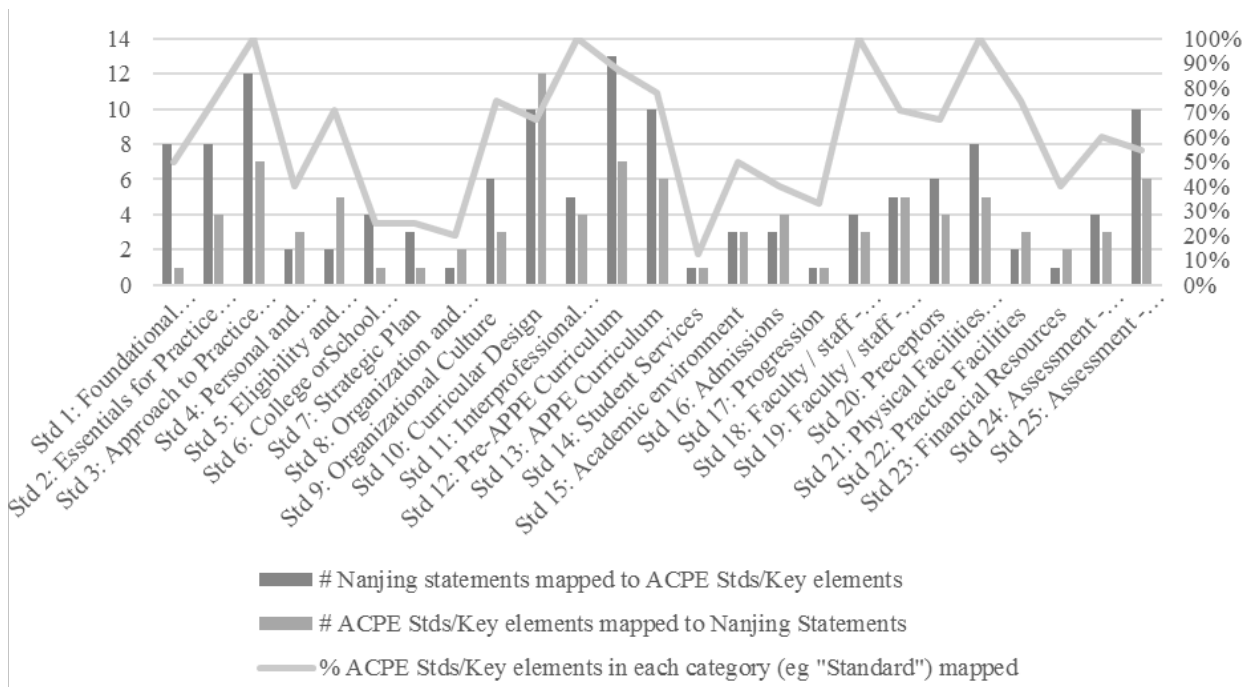
1.1 Workforce planning, at national and local levels, should include the roles of all relevant personnel, (e.g., pharmacy technicians/assistants, generalist pharmacists, specialists, advanced practitioners and pharmaceutical scientists) sufficient to meet local health needs as part of the health care system.
7.8 The accreditation system should use published standards that have been developed and adopted with broad stakeholder involvement.
7.9 The accreditation system should use policies and procedures that ensure: evaluation by appropriately qualified and experienced peers; absence of conflict of interest; confidentiality; and fair and consistent application of standards.

Figure 1: Nanjing Statements mapped to ACPE Standards/key elements



ACPE - Accreditation Council for Pharmacy Education; Stds - Standards

Figure 2: ACPE Standards/key elements mapped to Nanjing Statements



ACPE - Accreditation Council for Pharmacy Education; Std(s) - Standard(s); APPE - Advanced Pharmacy Practice Experience

Discussion

Similar areas of pharmacy education between AP and NS centre around professional skills. While there is alignment, there are notable unmapped areas. Unmapped NS 1.1 regarding workforce planning, highlights the importance of incorporating all pharmacy stakeholders and addressing the local and national healthcare workforce needs, an area FIP has been promoting (FIP, 2016). Continue discussion is encouraged in the US regarding strategically tailoring pharmacy education and workforce planning from a population health perspective. The two unmapped NS on broad stakeholder involvement and peer review (Statements 7.8 and 7.9), while not formally in the AP, are highlighted in the preamble of the AP. This difference in the two education standards is important because national pharmacy education standards may not explicitly list elements that map to NS.

Nanjing Clusters with a higher number of elements which did not map to the AP, may speak to the differences in intent. The NS are broad educational statements to advance the profession as a whole, including professional development beyond pharmacy education. The AP for the US Doctor of Pharmacy (Pharm.D.) degree, focus on programme requirements. Continuing professional development criteria are addressed in a separate set of standards (ACPE, 2017). AE which had a low match rate to the NE are consequent to the AP's focus on educational degree programmes, rather than the broader profession.

There were a number of limitations including a small number of reviewers who may not have captured all interpretations of mapping. Due to the different intent and intended audiences, there was a challenge in achieving clear mapping for a number of Standards; caution is advised regarding the applicability of the map. Despite this, identifying common themes and differences helps frame the NS and their utility in advancing pharmacy education.

Future directions could include additional independent reviewers or a larger group of reviewers. This could improve external validity and generalisability. A key part of global workforce planning could be to continue this alignment of the global educational statements. Future research on comparing national standards to the FIP NS could further underscore differences in national pharmacy education and global ideals. Research on how such comparisons advance pharmacy education will highlight the true impact of such research.

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