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Evaluating Knowledge Acquisition in Foundational Child Welfare Field Staff Trainings

Introduction

- Since 1988, the ISU Child Welfare Research and Training Project (CWRTP) has provided training administration, coordination, design, development, and program evaluation for the Iowa Department of Health and Human Services (HHS).
- HDFS graduate students provide integral support for the program evaluation. The present summary is a component of the fiscal year comprehensive reports, which guide annual improvements to the courses.
- HHS child welfare field staff must complete role-specific foundational training at the start of their employment.
- Depending on their role, foundational training includes either SW 020 Foundations of Social Work Case Manager Practice or CP 200 Child Protection Worker Practice. Each course consists of eight training days spread across 6-7 weeks. Learners take four days of classroom training, complete field practice for 4-5 weeks, and return for another four days of classroom training.
- Course pre- and post-tests are designed for the purposes of measuring learning objectives as well as to identify topic areas where follow-up training or additional supervisory guidance may benefit the learner. The pre- and post-tests are not designed as a qualifying job measure. Knowledge scores were collected electronically from trainees who attended foundational courses in the State Fiscal Year (SFY) between July 1, 2021, and June 30, 2022. Attendees are required to take pre- and post-tests. The criterion on the post-test is set at scoring 80% or higher. Learners could retake the test up to 12 times.



Research Questions

- Q1.** What are exploratory findings for two child welfare foundational trainings?
- Q2.** How many learners met the criterion (at or above 80%) on pre and post-tests?
- Q3.** On the post-tests, which items did learners score either 100% or lower than 50%?
- Q3-1.** What topics are learners well-acquainted to manage?
- Q3-2.** Which topics do learners need more knowledge acquisition?

Methods

- Data: Electronic test scores on **pre- and post-tests** collected between July 1, 2021, and June 30, 2022. The first test attempts were utilized to prevent test-enhanced learning.
- Sample: Only learners who completed both pre and post-tests were included: **69 of 91** for SW 020 and **25 of 51** for CP 200. For the item analyses, **45 test items** from SW 020 and **35** from CP 200 were utilized.
- Analyses: Descriptive and T-test analyses were conducted using Excel and the SPSS v27 statistical program.

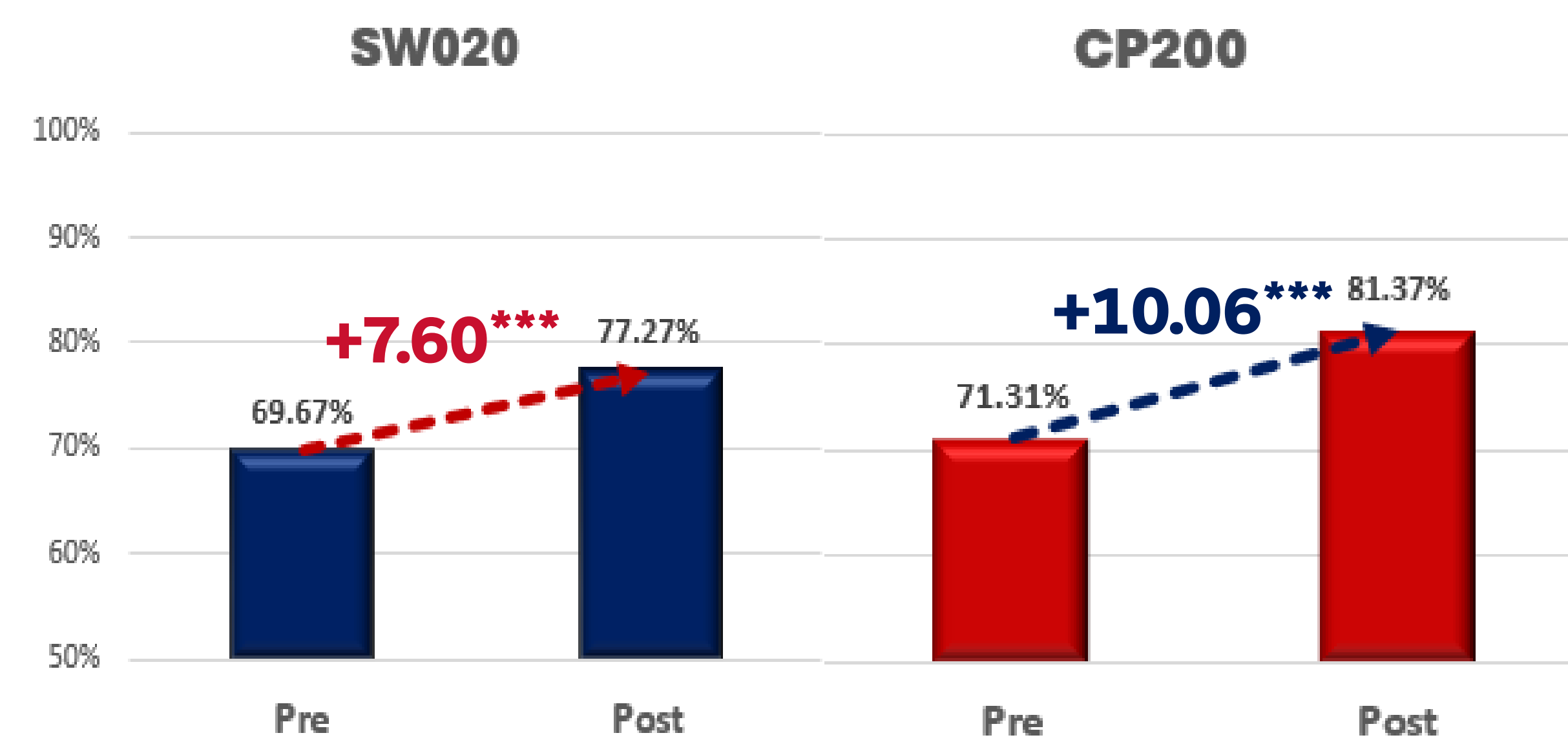
Results

Q1: On average, learners from SW 020 scored 69.67% on the pre-test and 77.27% on the post-test, indicating that the average score rose by 7.60% ($t = 6.34, p < .001$). They made an average of 1.28 attempts on the pre-test and 1.69 on the post-test. Learners from CP 200 scored 71.31% on the pre-test and 81.37% on the post-test, indicating an average improvement of 10.06% ($t = 6.42, p < .001$). Their average attempt was 1.08 on the pre-test and 1.04 on the post-test (Fig. 1 & Table 1).

Table 1. Attempts

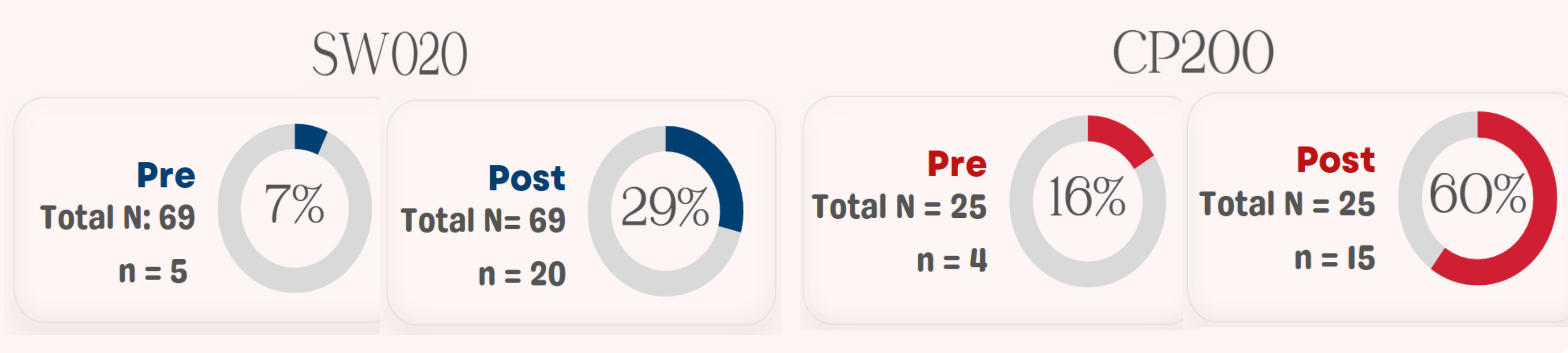
Training	Pre	Post
SW020	1.28	1.69
CP200	1.08	1.04

Figure 1. Average Scores



Q2: In SW 020, only 7.24% ($n = 5$) of learners met the criterion (at or above 80%) on the pre-test, but this number significantly increased to 28.99% ($n = 20$) on the post-test. Similarly, in CP 200, 16% ($n = 4$) of learners met the criterion on the pre-test, while 60% ($n = 15$) achieved the criterion of 80% or higher on the post-test (Fig. 2).

Figure 2. Meet the Criterion

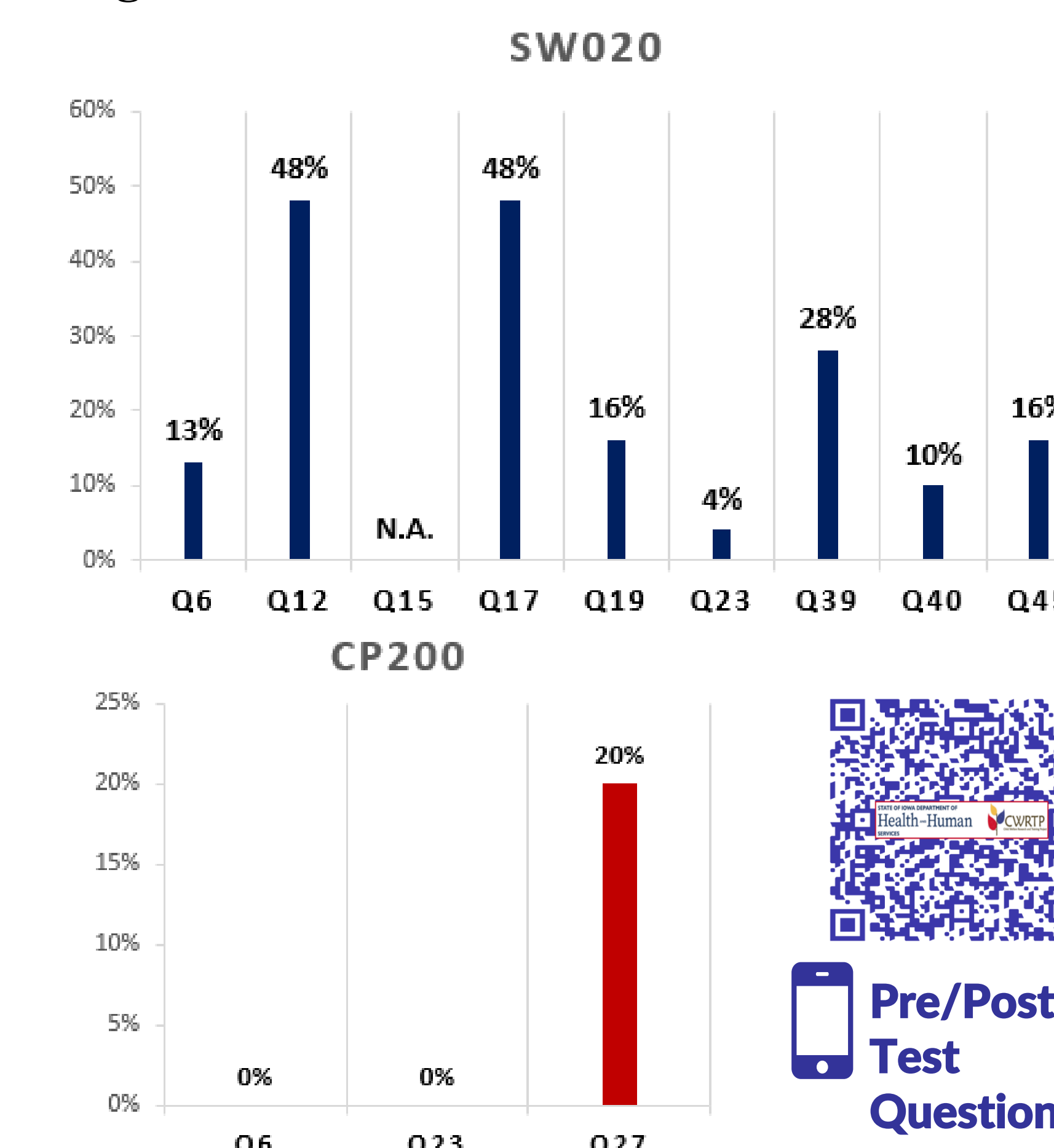


Q3: On the post-tests, SW 020 and CP 200 learners scored 100% on five items, and 11 items, respectively (Table 2). Items below 50% are shown in Fig. 3.

Table 2. Full-Score (100%) Items

SW020	CP200
5 Items	11 Items
Q2	Q8
Q8	Q10
Q9	Q13
Q29	Q14
Q36	Q17
	Q18
	Q22
	Q26
	Q29
	Q34
	Q35

Figure 3. Items Below 50%



Q3-1 & 3-2: A result of topic extraction from 'well-acquainted' items (100% correct answer) and 'need more knowledge acquisition' items (below 50% correct answer) for SW 020 and CP 200 was shown in Fig. 4.

Figure 4. Item Analyses – Topic Extraction



Conclusion and Future Directions

- Learners in SW 020 and CP 200 demonstrated notable test score improvements, with average scores increasing by 7.60% and 10.06% points respectively.
- Based on low scoring on specific items, topics needing more attention are child safety, permanency goal, reporting protocols and legal policy (i.e., ETV) in both trainings. Addressing these gaps through targeted interventions is crucial.
- Continuous longitudinal follow-ups are essential to identify persistent learning challenges. Online test structural errors should be addressed in the future.