**University Of Hawai‘i West O‘ahu**

**Division of Education**

**AY 2011-12**

**Assessment of Institutional Learning Outcome #5**

***Critical Thinking***

**Report prepared by**

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 ***Preparing Knowledgeable, Skillful, Responsive Educators for a Global Society***

***Introduction***

 The University of Hawai‘i West O‘ahu Teacher Education Programs prepare *Knowledgeable, Skillful, Responsive Educators for a* ***Global*** *Society*. Through a rigorous, field-based program of study, teacher candidates examine the art of teaching throughout the process of 1) delivering high quality instruction that addresses the needs of the whole child, 2) embracing social justice and equity for all, and 3) becoming reflective practitioners and life-long learners. The Bachelor of Education (BEd) degree prepares highly qualified K-6 regular classroom teachers for Hawai‘i's workforce. Since initial implementation in Fall 2007, the program has graduated 57 candidates, 28 of whom are known to be teaching full time in O‘ahu’s public schools. (Workforce data collection on 19 fall 2011 graduates is in progress).

**Standards Alignment**

 Throughout the process of becoming an effective elementary school teacher, candidates engage in on-campus coursework and field-based activities that require critical thinking. The overall program of study is aligned with the Hawai‘i Teacher Standards Board (HTSB) and the Association for Childhood Education International (ACEI) standards for the preparation of teachers. The attached curricular alignment table illustrates where and at what level (*Introduced, Developed, Refined*) education courses address standards associated with critical thinking, professional ethics, and technology in the service of learning. Candidates develop and maintain an Electronic Portfolio of Signature Assignments and work samples that illustrate levels of proficiency (*unacceptable, acceptable, target*) achieved on each standard.

 Teacher Education professional standards most closely aligned with UH West O‘ahu ’s Critical Thinking ILO are as follows:

**UH-West O‘ahu Critical Thinking ILO**

**Critical thinking**: Demonstrate critical thinking skills by applying knowledge, technology, and information to solve problems and make decisions in socially responsible and ethical ways (*Includes using research skills, technology, knowledge, ideas, concepts, theories, information, etc. to solve problems and make decisions responsibly and ethically).*

**HTSB Standard 7**: Uses active learning strategies (*Helps students to question, problem-solve, access resources, use information to reach meaningful conclusions and develop responsibility for their own learning; Provides challenging learning experiences which develop higher order thinking skills)*.

**ACEI Standard 3.3:** Development of critical thinking & problem solving (*Candidates understand a variety of teaching strategies that encourage elementary students’ development of critical thinking, and problem solving, and performance skills)*.

**HTSB Standard 9:** Demonstrates professionalism *(Conducts self ethically in professional matters. Models ethical behaviors, including honesty, fairness and respect for individuals and for rules).*

**ACEI Standard 5.1:** Professional growth, reflection, & evaluation *(Candidates reflect on and modify their practice in light of research on teaching, professional ethics, and resources available for professional learning).*

**HTSB Standard 5:** Demonstrates knowledge of content (*Possesses an understanding of technology appropriate to the content).*

**ACEI Standards 2.1-2.7.** Candidates demonstrate knowledge of content: Reading, Writing, Oral Language, Science, Mathematics, Social Studies; The Arts; Health Education; Physical Education. (*Candidates demonstrate skill in the creation of a high quality literate environment for the classroom that includes attention to books, electronic based information sources, and locally created materials; Candidates are able to provide ways for students to use traditional and technology-based tools for communication and problem solving).*

**Assessing Critical Thinking**

In fall 2011 the UHWO Assessment Committee charged each university division to assess ILO #5, Critical Thinking. Division representatives on the committee provided their respective faculties with the guidelines and rubric for use when planning and conducting the assessment. Education Division faculty met early in the semester to discuss the best way to assess critical thinking skills and abilities among its candidates for the B.Ed in elementary education. Given the three distinct critical thinking dimensions represented in the rubric, faculty determined that a single assignment would not adequately assess the learning outcome. Therefore, faculty identified three Signature Assignments, taken from the candidates’ electronic portfolios, that would provide evidence of proficiency in Ethical Analysis, Application of Technology, and Logical Analysis in the Discipline. The selected Signature Assignments were representative work samples from candidates’ freshman/sophomore, junior, and senior years, respectively, as follows: *Professional Digital Portfolio or PowerPoint Presentation of Thematic Unit* (EDEE 297, Educational Media & Technology); *Case Study of a Struggling Literacy Learner* (EDEE 424, Language Arts Methods, WI); *Ethics-focus Research Paper* (EDEE 492, Student Teaching Seminar, WI).

**Procedures**

 At the end of each semester, B.Ed candidates are required to upload Signature Assignments to their individual electronic portfolio accounts located at Taskstream.com. Signature Assignments are also be archived at the Laulima course website. Instructors, in turn, evaluate Signature Assignments in Tasktream, and data is collected for accreditation reports.

 Instructors for EDEE 492, 297, and 424 provided the elementary education three-member faculty assessment team access to their candidates’ signature assignments. Working in pairs, team members independently scored each signature assignment using the rubric provided by the UHWO Assessment Committee. Once complete, the pairs compared ratings. Where discrepancies occurred, team members revisited the paper(s) and came to consensus on the final score. All data collected therefore represents 100% agreement among raters.

**Results**

Overall, elementary education candidate performance on the UHWO Critical Thinking ILO exceeded the standard, with a total raw score of 7.27 (Table 1). Data indicates *advanced* (perfect score of 3.0) performance in the area of Technology Applications. A score of 2.7 for the Logical Analysis dimension indicates candidate performance exceeds the *intermediate* level. Candidate performance on Ethical Analysis was lowest at 1.57, falling between *introductory* and *intermediate* levels.

**Table I**

**UHWO Critical Thinking ILO**

**Division of Education**

|  |  |  |
| --- | --- | --- |
| **Critical Thinking**  **Dimensions** |  **Performance Level Frequencies** |  **Summary** |
| Advanced  (3) | Intermediate  (2) | Introductory  (1) | Inadequate  (0) | MeanScores | StandardDeviation |
| Ethical Analysis N = 19 |  6 |  4 |  4 |  5 | 1.57 | 1.21 |
| Application ofTechnology N = 11 |   11 |  |  |  | 3.0 | 0 |
| Logical Analysis N = 13 | 10 | 3 |  |  | 2.7 | .43 |
|  Total N = 43 | 27 | 7 | 4 | 5 | 2.3 |  1.05 |
|  **Total Raw Score: 7.27 -- Rank: Exceeds Standard (7-9)** |

**Discussion**

 The following is a qualitative analysis of candidate performance on each of the critical thinking dimensions described in the UHWO ILO rubric. Analyses are situated within the course work and signature assignments used to generate data.

Ethical Analysis:

* EDEE 492, Student Teaching Seminar: *Ethics-focus Research Paper*

 In this senior capstone, ethics-focused, writing intensive (WI) seminar, candidates write a 7-page paper with citations and APA reference style. Candidates choose a relevant educational topic (they are guided the first few weeks in their selections) and create a dilemma for practicing teachers, which would require an ethical choice and solution. Two drafts were required: The first focused on securing resources on a topic. The second on creating the dilemma. The final merged both drafts.

 Results indicate that candidate performance on *Ethical Analysis* was the least proficient among the assessed critical literacy dimensions. Ten of 19 candidates scored at either intermediate or advanced levels (54%), while nine scored at the introductory level (21%). The assessment team rated five papers (25%) as inadequate.

 Hallmarks of advanced and intermediate-level papers included deep analysis of a clearly described ethical dilemma and multiple, research-based, substantive solutions. For example, one candidate described the ethics of “Teaching to the Test,” a dilemma that teachers often face when feeling the pressures of political mandates, such as those imposed by NCLB. Introductory-level papers identified an ethical dilemma; however, the solutions to the problem were underdeveloped and not necessarily research-based.

 The most common problem across the five papers ranked inadequate was the absence of a clearly identified ethical dilemma. While each of these papers identified a dilemma (e.g., the impact of deployment on military students’ academic and social performance), candidates in this ranking failed to describe how the dilemma related to ethical decision-making and problem-solving by the teacher. For example, one candidate identified “bullying” as a dilemma, in the context of emotional child abuse termed “parental bullying.” The *ethical* nature of this dilemma was not identified nor was a discussion of the legal requirement to report suspected child abuse provided.

Application of Technology

* EDEE 297, Educational Media & Technology:

 *Professional Digital Thematic Unit Portfolio or*

 *PowerPoint Presentation of Thematic Unit*

 Educational Media & Technology is a lower division course typically taken by candidates during their freshman or sophomore year. In this Signature Assignment, candidates showcased four, Internet-based and/or digitally produced artifacts used as part of a research-based thematic unit. Artifacts included WebQuests, spreadsheets, parent brochure/classroom website, and other multimedia projects. The assessment team rated all projects at the advanced level (100%). Evidence clearly indicated candidates’ significant use of technology at the application level. According to reviewers, thematic units were wide-ranging, interesting, and original. For example, in the unit “Our Solar System,” students completed a “Your Weight on Other Planets” spreadsheet activity in which they gathered data, solved equations, and made observations about recorded data. In the unit on “Cultural Appreciation,” students complete a WebQuest in which they explored, viewed, and analyzed Internet-based information on the culture of Mexico.

Logical Analysis

* EDEE 424, Language Arts Methods: *Case Study of a Struggling Literacy Learner*

 Language Arts Methods is taken concurrently with Reading Methods and Practicum during Block 1, the first of three professional teacher education blocked courses to be completed prior to Student Teaching. The Signature Assignment, *Case Study of a Struggling Literacy Learner*, required candidates to identify a K-6 student in his/her practicum setting who struggled with the English language arts: Reading, Writing, Listening, Speaking, Visualizing, and Visually Representing. Once identified (with assistance from the classroom mentor teacher), the candidate worked with the student one-on-one to assess his/her literacy skills and, ultimately, to analyze the data and formulate an intervention plan that would meet the student’s literacy-learning needs.

 Assessment team evaluators ranked 10 of 13 case studies at the advanced level of proficiency (77%) and scored the remaining 3 case studies at the intermediate level (23%). Overall, characteristics of advanced-level papers included clearly written descriptions of the struggling literacy learner’s social, emotional, and intellectual growth; an in-depth analysis of data collected on reading and writing skills; logical interpretations of data that led to substantive, research-based interventions in support of student literacy learning. Case studies falling just short of the advance level were less developed, especially in the context of data collection, analysis, and interpretation of emergent literacy and overall writing skills and abilities.

**Recommendations**

 Based upon the results of the UHWO ILO Critical Thinking assessment, the following recommendations are suggested to improve and sustain candidate proficiencies:

***Ethics*:** To improve candidates’ ability to identify, apply, and analyze a problem or research question and to develop an ethical solution:

* Integrate *The Ethics of Teaching* across Pre-professional foundations and Professional Teacher Education coursework, leading up to the Student Teaching seminar.
* Introduce *The Ethics of Teaching* early on in EDEE 200/201, Introduction to Teaching as a Career, followed by closer study of ethical dilemmas in EDEE 310,

 Foundations of American Education.

* The ethics of the teaching profession should also be revisited during methods blocks 1, 2, and 3, especially in the context of practicum experiences.
* Analyze the content and delivery of EDEE 492, WI, Ethics-focus Student Teaching Seminar, to determine what changes and resources may be needed to ensure candidate success when writing the E-focus research paper.

***Technology:*** To sustain and continue to develop candidates’ ability to identify, explain, and apply technology to conduct research or solve a problem:

* Integrate/increase technology-based assignments across the pre-professional and professional teacher education curriculum.

***Logical Analysis:*** To develop further and sustain candidates’ ability to identify, explain, and apply logical analysis to a disciplinary problem:

* Increase attention to emergent literacy and the composing process, in the context of EDEE 424 Language Arts Methods and concurrent EDEE 426 Practicum.
* Integrate/increase problem-based activities that require critical thinking and analysis, especially in the context of the disciplines: English Language Arts, Math, Science and the Social Studies. In this regard, Methods Blocks 1, 2, and 3 are target Teacher Education curricular areas leading up to the Student Teaching semester.

**Conclusion**

The Division of Education faculty appreciates the opportunity to have conducted an assessment of our candidates’ proficiency in UWHO ILO #5, Critical Thinking. Critical thinking skills are extremely important in the development of effective classroom teachers. Data generated in this assessment provides valuable information that enables the education faculty to engage in the continuous improvement of our teacher education program.