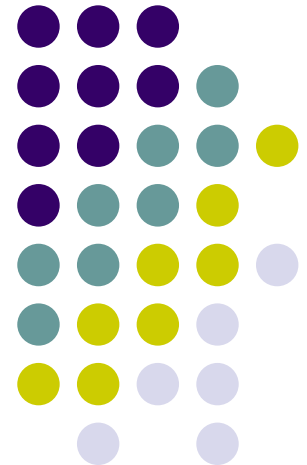


**Sustained Impact of
a Professional Development Program
for Postsecondary Faculty
Teaching Students with Disabilities:
A Case Comparison Study**



STUDENTS WITH DISABILITIES AS DIVERSE LEARNERS

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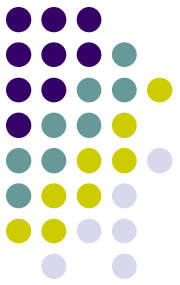
Dr. Hye-Jin Park

Data Collector

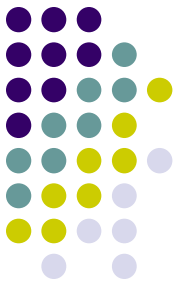
Michelle McDow

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“Teaching All Students, Reaching All Learners” Project

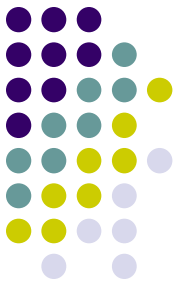


- Purpose: To enhance the knowledge, attitudes, and skills of faculty and staff working with students with disabilities (SWD) through professional development (PD), leading to improved retention and completion rates of SWD in postsecondary education.
- Trained 1,636 individuals, including 800 faculty and staff at UH-Manoa, since 2005
- Distributed PD content and results to 589 individuals nationally and internationally.



Content areas of the PD

- *Universal Design for Learning (UDL)*
- *Rights and Responsibilities*
- *Hidden Disabilities*
- *Mentoring*
- *Assistive Technology (AT)*



Short-Term PD Impact: Pre/Post Tests

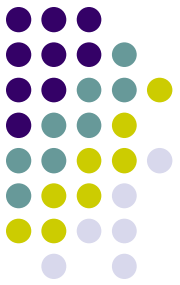
- From April 2007 to March 2009, 157 attendees completed six types of pre-post tests, depending on the content covered by a PD program.
- Short-term, significant impact in improving knowledge and attitudes.
- 100% of the participants evaluated the PD programs as useful
- 83.8% of the participants wanted to apply more than 50% of PD strategies.

Limitations of Pre/Post Tests



1. Whether identified changes as a result of the PD were sustained over time?
2. How trained faculty has actually implemented what they learned from the PD programs?
3. Whether changed practices, as a result of the PD, influenced class completion rates of students with and without disabilities?

=> Need to study any long-term impacts of the PD programs

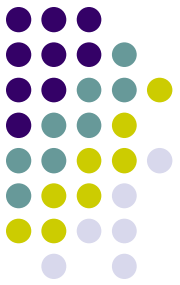


2008 Summer Institute

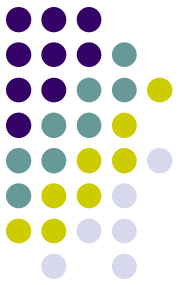
- When- 2008 Summer
- Where- at UH-M
- Duration- 3 consecutive days
- Attendees- 16 including 12 UH-M faculty
- PD Content- UDL, Rights & Responsibilities, Hidden Disabilities, Mentoring, and AT
- Significant improvement in familiarity with accommodations for SWD & professional skills in working with SWD after PD

Follow-Up Study

Research Questions



1. How did faculty attendees of the Summer Institute implement what they learned from the PD program?
 - 1(a) What strategies from the PD did they use?
 - 1(b) What helped them to implement the PD strategies?
 - 1(c) What challenges did they have in implementing the PD strategies?
 - 1(d) How did they evaluate what they did in the given semester?

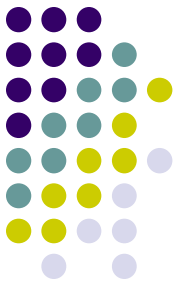


2. Did the faculty attendees of the Summer Institute retain change after the Summer Institute ?

2(a) How did their feeling of comfort in working with SWD change?

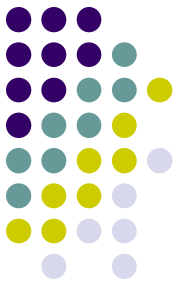
2(b) How did their attitudes toward diverse needs of students including SWD change?

2(c) How did their familiarity with providing reasonable accommodations change?



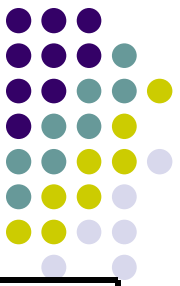
3. Did change after the Summer Institute influence the class completion rates of students with and without disabilities in the following semester?
4. What influenced the extent to which they implemented the PD strategies?

Research Plan & Data Collection Methods



- Collective case study
- Mixed methods

	Faculty Interview	Student Survey	Class Observation	Syllabus Checklist	Student Class Completion & Grade	Pre/Post Test Results
RQ1a	X	X	X	X		
RQ1b, 1c, 1d	X					
RQ2a, 2b, 2c	X	X				
RQ3					X	
RQ4	X	X	X	X		X

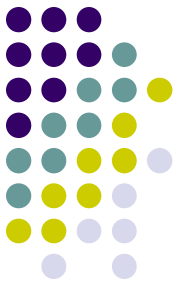


Faculty Participants

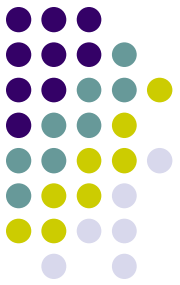
(7 out of 12 UH Faculty Attending the 2008 Summer Institute)

Faculty	Dept	Sex	Exp. w/ SWD	Exp. in UDL	Feeling of Comfort	Familiarity w/ Accommodations	Prof. Skills	Knowledge of UDL, HD, AT	Intention to Use PD Strategies
A	Non STEM	F	Little	N	+ Excellent	+ Excellent	0 Good	+	51-75%
B	Non STEM	M	Many	N	0 Fair	0 Fair	- Fair	+	51-75%
C	STEM	M	Little	Y	0 Good	0 Good	0 Good	0 (100%)	More than 75%
D	Non STEM	F	Many	.	+ Good	+ Good	0 Good	+	51-75%
E	STEM	M	Many	N	.	0 Good	+ Good	+	51-75%
F	Non STEM	F	Many	N	+ Excellent	+ Excellent	+ Excellent	+	More than 75%
G	Non STEM	M	Little	N	+ Good	0 Fair	0 Fair	+	More than 75%

Student Participants



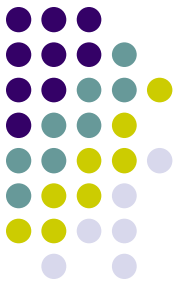
Faculty	# of Classes	# of Total Students	# of SWD (Documented Disability)	# of Survey Respondents		
				1st	2nd	Both
A	2	62	2	58	20	17
B	3	317	2	22	49	4
C	1	29	0	16	11	8
D	1	17	1	15	13	8
E	1	28	1	3	3	3
Total	8	453	6	172		



Data Analysis

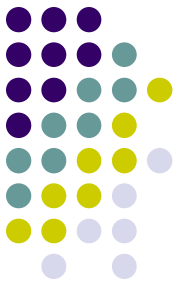
- Qualitative Data
 - Faculty interviews, class observation checklists
 - Constant comparison method using NVivo.
- Quantitative Data
 - Class observation checklists, student surveys, syllabus checklists
 - Descriptive statistics, t-test, chi-square statistics, regression analysis, analysis of variance, general linear modeling for repeated measures, and general linear modeling for multivariates.

RQ1(A) What strategies from the PD did they use?



Most Frequently Implemented PD strategies

1. Providing reasonable accommodations
 - Working with the Disability Student Services (100%)
 - Flexible depending on disability type & situation (57.1%)
 2. Applying UDL strategies
 - Make materials available, accessible to students (100%)
 - Use multiple means in presenting information (100%)
 3. Syllabus modification
 - Revise syllabus with a better disability statement (42.9%)
- * Reached out to the university and professional community, using what they learned from the Summer Institute (50%)



Most Frequently Experienced Strategies by the Student Participants

1. Making class materials accessible out of class
2. Collaboration with Disability Student Services offices
3. Adaptations of online materials

Most Frequently Used Class Activities by the Faculty Participants

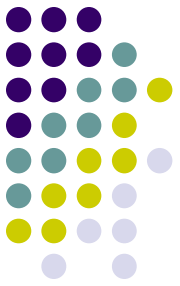
1. Lecture
2. Note taking
3. Assignment; Structured overview/review
4. Reading
5. Q & A

Most Frequently Used Instructional Materials by the Faculty Participants

1. Class notes
2. Textbooks
3. Visual materials
4. On-line resources

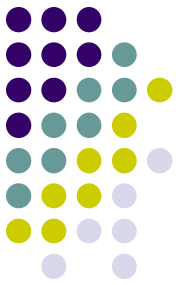
(*Audio materials – least frequently used)

RQ1(B) What helped them in implementing the PD strategies?



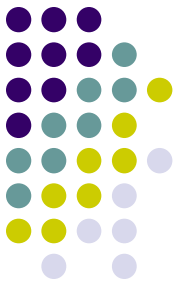
- 71.4% - Training from the PD program or other workshop helped them most
- 28.6% - Instructional technology (e.g., multimedia accessible classroom, class web, and technical help from library)

RQ1(C) What challenges did they have in implementing the PD strategies?



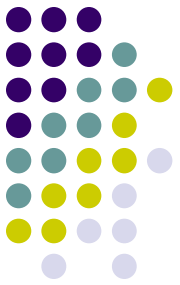
- 71.4%-Technical problems
 - Regardless of their perception of professional skills in working with SWD and intention to use the PD strategies
 - All social science majors
- 42.9%- Lack of direct support and resources
 - Despite wanting to use the PD strategies more than 75%
- 42.9%- Got puzzled about “reasonable” accommodations
- 42.9%- Identifying and meeting the needs of students with a new type of disability

RQ1(D) How did they evaluate what they did in the given semester?



- 100%- Did best as long as SWD appealed for their needs
- Became more mindful practitioners
- Think of strategies effective for All students and test out PD strategies and their own strategies with this perspective.
- 42.9%- Motivated to learn more deeply
 - Professor F- Plan to spend more time in applying UDL strategies.
 - Professor B- Became aware of many possibilities of improvement, but became cautious of giving many alternatives to students

Students' Evaluation on the Faculty Participants

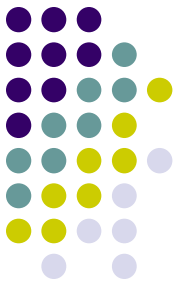


I. Syllabus

- The syllabus of this class included information about late papers, grade appeal, or extra credit.
- The syllabus of this class provided a specific course schedule (e.g., overview of what to learn each week and deadlines)

II. Instructional Goals

- The professor of this class clearly presented the lesson goals and objectives of this class.
- This class was appropriate to my level.



III. Instructional Materials

- The professor of this class provided various types of texts (e.g., textbook, journal article, newspaper, digital text).
- The professor of this class provided various resources (e.g., website, association, multimedia).

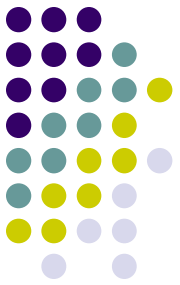
IV. Instructional Strategies

- The professor of this class was accessible during the semester.
- The professor of this class gave prompt feedback.

V. Assessment

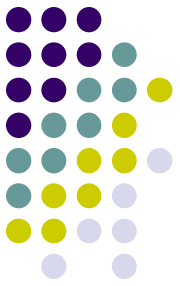
- The professor of this class clearly explained his/her expectation of student performance (e.g. providing a rubric, checklist, visual organizer, or exemplary work)
- Assessments of this class were directly related to learning goals and instructional methods.

RQ2(A) How did their feeling of comfort in working with SWD change after the Summer Institute?



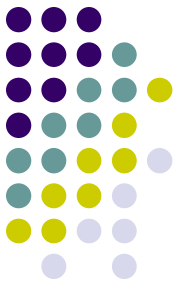
- The level of feeling of comfort after the PD was sustained over a semester.
- 4 Participants - Improved.
 - 3 - “good” level after the PD
 - 1- “excellent” level after the PD ->said improved more
- 3 Participants - unchanged.
 - 1- “excellent” level after the PD -> remained excellent
 - 1- “fair” level after the PD despite of many experiences in working with SWD. No improvement by the PD.
 - 1- missing data after the PD -> Said unchanged.

RQ2(B) How did their attitudes toward diverse needs of students including SWD change after the Summer Institute?



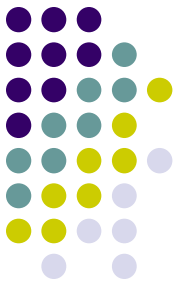
- Their level of attitudes toward diverse needs of students including SWD after the PD was sustained over a semester.
- 100%-Tried to become more responsive than before
- A significant difference in students' perception of faculty responsiveness
 - Professor B was rated lowest
 - Female faculty > Male faculty

RQ2(C)How did their familiarity with providing reasonable accommodations for SWD change after the Summer Institute?



- The level of their familiarity with reasonable accommodations for SWD after the PD was sustained over a semester.
- 100%- tried to accommodate the educational needs of SWD in their classes in collaboration with Disability Student Services.
- Two female faculty members were more active than others. They approached students observed to have difficulties, rather than waiting for their approach for help, and tried to identify their needs and adequate services.

RQ3. How did changes of the faculty after the Summer Institute influence the class completion rates & grades of students with and without disabilities in the following semester?

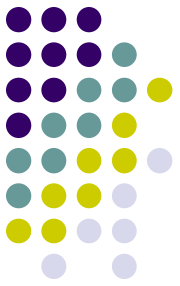


Course Completion Rate

- UH-M Average < All students in the Classes of the Trained Faculty (significant)
- UH-M Average < SWD in the Classes of the Trained Faculty (significant)
- No significant difference between students with and without disabilities within the classes of the trained faculty

(No significant difference among the groups in student grades.)

RQ4. What influenced the extent to which the faculty attendees of the Summer Institute implemented the PD strategies?

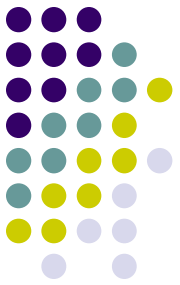


Independent Variables :

Faculty gender; department; previous experience in UDL before PD;
previous experience in working with SWD before the PD;
intention to use the PD strategies after the PD;
level of familiarity with accommodations for SWD after the PD;
level of attitudes toward SWD after the PD; and
level of feeling of comfort in working with SWD after the PD

Dependent Variables:

DV1) The use of accommodations for SWD
DV2) Employment of the disability statement in the syllabi
DV3) Application of UDL in syllabus, instructional goals, materials, strategies, and assessments

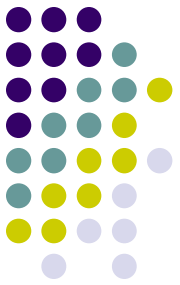


DV1) The use of accommodations for SWD

- By the department type, significant difference in providing adaptation of online materials (Non-STEM>STEM)

DV2) The employment of the disability statement in the syllabi

- No influential factors



DV3) Application of UDL in syllabus, instructional goals, materials, strategies, and assessments

(1) By gender of the faculty, significant difference

Female > Male

(2) By previous UDL experiences before PD, significant difference

Those who did not know the UDL before the PD >

Those who knew the UDL before the PD

(3) By the intention to use the PD strategies after the PD, significant difference

Those who intended to use the PD strategies 51% to 75% >

Those who intended to use the PD strategies more than 75%

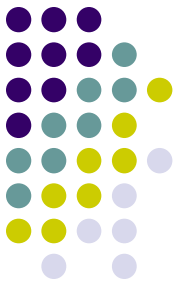
(4) By the level of familiarity with accommodations for SWD after the PD, significant difference

The higher- The more use of UDL

(5) By the level of feeling of comfort in working with SWD after the PD, significant difference

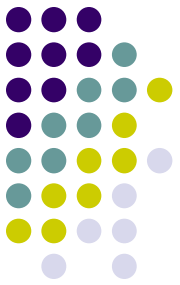
The higher – The more use of UDL

Conclusion

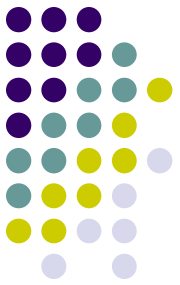


The sustained impacts of the Summer Institute were found by the follow up study.

- For a semester, the faculty participants did best in working with SWD and applied the PD strategies especially, providing reasonable accommodations for SWD, applying UDL strategies, and syllabus modification including disability access information.
- These faculty efforts were observed by their students and project staff.
- They became mindful practitioners and motivated to learn more.

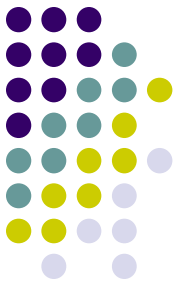


- The level of feeling of comfort in working with SWD, attitudes toward diverse needs of students including SWD, and familiarity with providing reasonable accommodations for SWD acquired after the PD was sustained over a semester.
- Course completion rates of all students and SWD of the trained faculty were higher than the UH-M average course completion rate.
- Factors significantly affecting the faculty's use of accommodations for SWD & their application of UDL in syllabus, instructional goal, materials, strategies, and assessments were found.

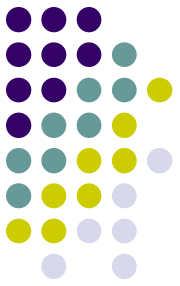


Discussion

- The faculty did not use the highest level of UDL strategies (e.g., Differentiate the curriculum and instruction to meet the varied levels and needs of students; allows students to choose a medium to present their acquisition of knowledge from their strengths and abilities; reflect multiple perspectives in the assessment) => Need more active application of UDL
- The faculty members were found to do a lecture most frequently and use notes and text books most frequently. => Confirm that UDL is a good method to modify their practice

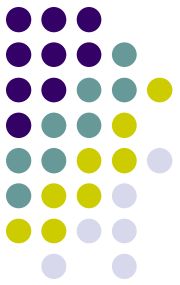


- Audio materials were the least used instructional material=> Need more consideration of accommodations for students with hearing impairment
- Instructional technology support was indicated as most helpful but, at the same time, most challenging factor => Need improved technical support
- The faculty need direct support and more resources.
- Factors found significantly different => Need to investigate “why”



Limitations

- Convenient sampling
- Small sample size of faculty members
- Small sample size of SWD
- Only at one campus



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