Understanding By Design (UbD) Process
Baker College

This document contains the UbD process flowchart and documentation for each step of the process

Baker College
5/28/2009
Baker College Mission, Purposes, and Institutional Student Learning Outcomes

Baker College Mission

The mission of Baker College is to provide quality higher education and training which enable graduates to be successful throughout challenging and rewarding careers.

Baker College Purposes

- To provide general education which expands students’ horizons, develops strong communications skills, and encourages critical thinking.
- To provide students with practical experience and training in a chosen field of study.
- To encourage social and classroom related activities which promote both personal and professional growth.
- To enhance students’ success through continuous assessment and improvement of teaching, learning, and institutional effectiveness.
- To assist graduates throughout their careers in securing employment and improving career opportunities.
- To encourage graduates to continue their education and to lead effectively through service in a world without boundaries.
- To offer graduate programs which provide students with advanced study, research, scholarly activity, and the opportunities for professional development.

Baker College Institutional Student Learning Outcomes

- “Career-ready” knowledge and skills in the chosen career field.
- Behaviors and attitudes that promote success in the workplace as well as promote effective social interaction with diverse peoples across a range of situations.
- Information literacy which includes recognizing the need for information and identifying, locating, evaluating, and effectively using that information.
- Effective communication, including the use of technology, in various contexts and situations and with a variety of audiences.
- Critical thinking skills including analysis and synthesis both within the career field and in more general contexts.
- Effective problem-solving skills which are applicable to the field of study, the workplace, and other life situations.
- Broad-based knowledge, which includes an understanding of cultural, social, political, and global issues.
Understanding By Design (UbD) Process

Baker College UBD Process Graphic

- Baker College Mission, Purposes, and Institutional Student Learning Outcomes
- Programs
- Courses
- Instructional Units
- Learning Experiences
Understanding By Design (UbD) Process

Course Level Design

Pre-design Work

1. Identify course for design
2. Identify courses in sequence
3. Collect current data regarding course
4. Identify who needs to be at the table
5. Schedule design meeting

Stage 1 – Identify Desired Results

1. Work through the Stage 1 design questions
2. Record Stage 1 design question answers
3. Satisfied with Stage 1 design answers?
4. Write course SLOs and enabling objectives
5. Do SLOs & enabling objectives align with progress outcomes?
6. Yes the SLOs & enabling objectives at the right levels of Rigor and Relevance?
7. SLOs ratified by all stakeholders?

Stage 2 – Determine Acceptable Evidence

1. Identify who needs to be at the table
2. Complete SLO, Recommended Strategies part of CCT
3. Work through Stage 2 design questions
4. Record Stage 2 design question answers
5. Satisfied with Stage 2 answers?
6. Design assessment plan

Stage 3 – Planning Learning Experiences

1. Identify who needs to be at the table
2. Work through Stage 3 design questions
3. Satisfied with Stage 3 design answers?
4. Design learning experiences & assessments
5. Identify instructional resources and materials to support learning experiences
6. Map assessments from Stage 2 and learning experiences from Stage 3 to SLO matrix

7. Do assessments and learning experiences align with SLOs and enabling objectives?
8. Develop course documents for online, hybrid, and in-person course
9. Build Blackboard course shells
10. Launch course(s)
11. Collect and analyze data
12. Revize course based on data, if necessary
Understanding By Design (UbD) Process

Program Level Design

Pre-Design Work

Step 1

Collect current data regarding program 1

Collect all current and pertinent data regarding the new program. This should include but isn't limited to career data and data to support the need for the program. Include in this information about the intended audience for the program and what level the program exists...certificate, associate, bachelor, masters, or doctorate. Use Baker Mission, Purposes, and Institutional Student Learning Outcomes.

Step 2

Identify who needs to be at the table 2

Suggested to include the following:

- Faculty for subject matter expertise
- Dean or Department Head
- Instructional Designer(s) (must have)
- Career Services representative (people who know what students need for a career in this program area)
- Advisory Board member(s) (this may help with the career information)
- System Curriculum Director
- Professionals from field
- Assessment experts
- Note taker to record work for documentation and historical purposes
- Others???

Step 3

Schedule design meeting 3

Send information to those identified to be at the table. Inform them of the meeting time and place and provide current program data collected in step 1.
Step 1

Use Baker College UbD Design Template (taken from pg. 31 UbD Workbook)

Use UbD design standards pg. 28

Use Clarifying Content Priorities diagram pg. 71 of UbD and pg. 78 & 79 of UbD Workbook

Use Identifying Essential Questions

Ask the following Stage 1 Questions at the program level.

1. Established Goals: What are the long-term transfer goals? What relevant goals will this design address, includes standards, certifications, licensing requirements? In the end, students should be able, on their own, to...

2. Understandings: Students will understand that...these are overarching, enduring understandings.

What are the Big Ideas? Big Ideas are defined as: (Wiggins & McTighe, 2006, Understanding by Design, pg. 69)

- Broad and abstract
- Represented by one or two words
- Universal in application
- Timeless-carry through the ages
- Represented by different examples that share common attributes.

What specific understandings about them are desired?

Essential Questions: What are the essential questions to be continually explored? These are overarching questions. Tip: We are looking for a “few good questions”. Essential questions are meant to:
Program Level Design

Stage One – Identify Desired Results

Cause genuine and relevant inquiry into the big ideas and core content.

Provoke deep thought, lively discussion, sustained inquiry, and new understanding as well as more questions.

Require students to consider alternatives, weight evidence, support their ideas, and justify their answers.

Stimulate vital, ongoing rethinking of big ideas, assumptions, prior lessons.

Spark meaningful connections with prior learning and personal experiences.

Naturally recur, creating opportunities for transfer to other situations and subjects.

Students will know...What key knowledge and skills will students acquire?

Students will be able to...What will students be able to do at the end of the program.

We use the information from these two questions to write program outcomes in the next step of process.

These should all align with the Baker Mission, Purposes, and Institutional Student Learning Outcomes.

Step 2

Use the Baker College UbD Design Template taken from pg. 31 of UbD Workbook or UbD Curriculum Map for Stage 1 on pgs. 20 and 21 of UbD Workbook.
Program Level Design

Stage One – Identify Desired Results

Step 3 – Decision Point

Satisfied with Stage 1 design results?

All parties must agree with the responses to the Stage 1 design questions before moving to the next step in the process. If there isn’t agreement, move back to Step 1 of Stage 1 and repeat process. Use Design Standards document to assess Stage 1 against design standards.

Step 4

Write Program Outcomes

Students will be able to...What will students be able to do at the end of the program. This comes from answers to Stage 1 questions. Use Bloom’s Taxonomy action verbs. Write broad program outcomes at this level. These should all align with the Baker Mission, Purposes, and Institutional Student Learning Outcomes.

Step 5

Map to Institutional SLOs

Map program outcomes to Institutional SLOs. Make sure that program outcomes align with Baker Mission, Purposes, and Institutional SLOs. Make adjustments as needed.

Step 6 – Decision Point

Program outcomes and mapping ratified by all stakeholders?

All parties must agree with mapping to Institutional SLOs before moving to the next step in the process. If there isn’t agreement, move back to Step 4 of Stage 1 and re-work program outcomes. If there is agreement, move ahead in the process.
Program Level Design

Stage Two – Determine Acceptable Evidence

**Step 1**

- Use Baker College Ubd Design Template taken from (pg. 31 UbD Workbook)
- Use UbD design standards pg. 28
- Assessment experts are highly involved here
- Ask the following Stage 2 questions:
  
  What performances are indicative of understanding, transfer of learning and understanding of big ideas? This is at the program level so these answers may include ability for students to get a job, to get promoted at their current job, to move into a career or to graduate level program. For programs that require certification the performances may be related to preparation for passing the certification or obtaining a license. These should all align with the Baker Mission, Purposes, and Institutional Student Learning Outcomes.
  
  What other evidence is required in light of the Stage 1 desired results? (Program Outcomes)
  
  What criteria and indicators will be used to assess against the goals? (How are you going to know that students are successful at achieving the program outcomes?)

**Step 2**

- Record Stage 2 design question answers
- Use Baker College UbD Design Template taken from pg. 31 of UbD Workbook

**Step 3**

- Design assessment plan
- The assessment plan at the program level provides general ideas of assessment types that will provide evidence of successful completion of the program. The tools are designed and developed later based on this information.
Program Level Design

Stage Two – Determine Acceptable Evidence

Assessments should include longitudinal assessments for transfer and assessments that measure student success at the end of the program. See pg. 92 of Schooling by Design. Assessments should also be formative at points during the program to assess student learning and progress toward program outcomes.

Step 4

Map assessment plan to program outcomes

This will show how the assessment plan aligns to each of the program outcomes.

Step 5 – Decision Point

Assessment design plan ratified by all stakeholders?

All parties must agree with answers to the Stage 2 questions before moving to the next step in the process. If there isn’t agreement, move back to Step 1 of Stage 2. If there is agreement, move ahead to the next step.
Understanding By Design (UbD) Process

Program Level Design
Stage Three – Planning Learning Experiences

Step 1

Translate Stage 1 & 2 answers into topics

Based on Stage 1 answers and stage 2 assessments, what overarching areas (sometimes called topic areas) do we need to address in the program? This information will lead to the identification of courses, course SLOs and enabling objectives. Align these with program outcomes.

Step 2 – Decision Point

Satisfied with topic areas?

All parties must agree with answers to the topic areas before moving to the next step in the process. If there isn’t agreement, move back to Step 1 of Stage 3. If there is agreement, move ahead to the next step.

Step 3

Identify courses to align with program outcomes

Take the topics identified in the previous step and identify course areas that will cover these topics. SLOSs for the courses are not created at this point as they must go through the stage 1 at the course level.

Step 4

Identify courses & sequence

Identify new course and existing course to be used and sequence the courses in the order they will be taken in the program. This includes the identification of prerequisite courses. This is important because creating the course SLOs requires identifying the courses to be taken before and after each course. At this point it may be possible to determine the credit hours for the course, and, if needed, the number of hours of lecture versus lab time.
Course Level Design

Pre-Design Work

Step 1
Identify course for design

Step 2
Identify courses in sequence

This includes all prerequisite courses and the next courses in line.

Step 3
Collect current data regarding course

Data can include career data from potential employers, Advisory Boards, if it is an existing course any data collected regarding student and faculty satisfaction, direct measure data, data about the course itself such as credit hours and labs, program data, data from faculty who teach or have taught the course (best practices, what worked and didn’t work). Collect information on standards that must be met for certifications, licensing, etc. Use program information from earlier in the process to identify intended audience. These should all align with the Baker Mission, Purposes, and Institutional Student Learning Outcomes.

Step 4
Identify who needs to be at the table

The process changes here. We don’t need all the individuals at the table that were present before. As long as we have collected the data from step 3, the following are needed:

- Faculty for subject matter expertise
- Instructional Designer (s) (must have)
Send information to those identified to be at the table. Inform them of the meeting time and place and provide current course and program data collected in step 1.
Course Level Design

Stage One – Identify Desired Results

Step 1

Use the Baker College UbD Design Template taken from pg. 31 UbD Workbook

Use UbD design standards pg. 28

Use Clarifying Content Priorities diagram pg. 71 of UbD and pg. 78 & 79 of UbD Workbook

Ask the following Stage 1 Questions at the course level.

5. Established Goals: What are the long-term transfer goals? What relevant goals will this design address, includes standards, certifications, licensing requirements? In the end, students should be able, on their own, to...

6. Understandings: Students will understand that...these are overarching, enduring understandings.

What are the Big Ideas? Big Ideas are defined as: (Wiggins & McTighe, 2006, Understanding by Design, pg. 69)

• Broad and abstract
• Represented by one or two words
• Universal in application
• Timeless-carry through the ages
• Represented by different examples that share common attributes.

What specific understandings about them are desired?

Essential Questions: What provocative questions will foster inquiry, understanding and transfer of learning? These are overarching questions. Tip: We are looking for a “few good questions”. Essential questions are meant to:

Cause genuine and relevant inquiry into the big ideas and core content.

Provoke deep thought, lively discussion, sustained inquiry, and new understanding as well as more questions.
Course Level Design

Stage One – Identify Desired Results

Require students to consider alternatives, weight evidence, support their ideas, and justify their answers.

Stimulate vital, ongoing rethinking of big ideas, assumptions, prior lessons.

Spark meaningful connections with prior learning and personal experiences.

Naturally recur, creating opportunities for transfer to other situations and subjects.

Students will know... What key knowledge and skills will students acquire? What will students be able to do at the end of the course? This information will be used to write the SLOs and enabling objectives in Step 4.

These should all align with the Baker Mission, Purposes, and Institutional Student Learning Outcomes

Step 2

Record Stage 1 design question answers

Use the Baker College UbD Design Template taken from pg. 31 UbD Workbook.

Step 3 - Decision Point

Satisfied with Stage 1 design answers?

All parties must agree with the responses to the Stage 1 design questions before moving to the next step in the process. If there isn’t agreement, move back to Step 1 of Stage 1 and repeat process.

Step 4

Write course SLOs and enabling objectives

Students will be able to... What will students be able to do at the end of the course? This comes from answers to Stage 1 questions. Use Bloom’s Taxonomy action verbs. Write broad student learning outcomes at this level. Write specific enabling objectives for each SLO using Bloom’s Taxonomy action verbs, conditions, and criterion to meet Quality Matters standards and guide students' understanding of what learning will take place. Get these into a rough format. For online and hybrid, incorporate Quality Matters standards for
Course Level Design

Stage One – Identify Desired Results

outcomes and objectives. Instructional Designers will write appropriate SLOs and enabling objectives and align to Quality Matters.

Step 5 - Decision Point

Do SLOs & enabling objectives align with program outcomes?

All parties must agree that the SLOs and enabling objectives align with the program outcomes before moving to the next step in the process. If there isn’t agreement, move back to Step 4 of Stage 1 and repeat process. If everyone agrees, move to the next step in the process. Instructional Designers will complete the mapping.

Step 6

Map SLOs & enabling objectives from Stage 1 work to Rigor and Relevance

In this step, map the SLOs and enabling objectives to Blooms Taxonomy and levels of authentic application USING RIGOR AND RELEVANCE. This will provide us a map that we can use to align the SLOs and enabling objectives to appropriate assessments, instructional strategies and learning activities based on research. The Rigor and Relevance framework mapping tool can be obtained from Baker Online CDT. Instructional Designers will complete the mapping.

Step 7

Are the SLOs & enabling objectives aligned to Rigor and Relevance?

All parties must agree Rigor and Relevance mapping before moving to the next step in the process. If there isn’t agreement, move back to Step 6 or 7 of Stage 1 and repeat process. If everyone agrees, move to the next step in the process. Instructional Designers will review mapping for approval.
Course Level Design

Stage One – Identify Desired Results

Step 8 – Decision Point

SLOs ratified by all stakeholders?

All stakeholders must agree with SLOs before moving forward in the process.
Course Level Design

Stage Two – Determine Acceptable Evidence

Step 1

Identify who needs to be at the table.

Identify who needs to be at the table for this part of the process. This is primarily the work of the instructional designers.

Content experts and assessment experts should be used as needed for consultation, but the instructional designers have the expertise to design appropriate assessments at the course level.

Step 2

Complete SLO, Recommended Strategies part of CDT

The Course Design Template (CDT) is used by Baker Online and is the "blue print" for the course. This is the work of the Instructional Designers.

Step 3

Work through Stage 2 design questions

Use the Baker College UbD Design Template taken from page 31 of the UbD Workbook

Use UbD design standards pg. 28
Course Level Design

Stage Two – Determine Acceptable Evidence

Ask the following Stage 2 questions:

“When we speak of evidence of desired results, we are referring to evidence gathered through a variety of formal and informal assessments during a unit of study or a course. We are not alluding only to end-of-teaching tests or culminating tasks. Rather, the collected evidence we seek may well include traditional quizzes and tests, performance tasks and projects, observations and dialogues, as well as students’ self-assessments gathered over time.” (Wiggins & McTighe, 2006, Understanding by Design, pg. 19)

• Based on Rigor and Relevance mapping, what are appropriate types of assessments for the quadrants where SLOs and enabling objectives reside? Refer to SLO, recommended instructional strategies and assessment documents.

• What performances are indicative of understanding, transfer of learning and understanding of content via big ideas? Use 6 facets of understanding to guide assessments.

1. Understanding as Explanation

2. Understanding as Interpretation

3. Understanding as Application

4. Understanding as seeing things in Perspective

5. Understanding as having Empathy

6. Understanding as Reflective Self-Knowledge

Use course level enabling objectives from Stage 1.

• What other evidence is required in light of the Stage 1 desired results?

• What formative assessments will be used and what feedback will be given?

• What criteria and indicators will be used to assess student work against the goals? Use Rigor and Relevance for appropriate assessment types. Include self-assessments and reflections.

• For online and hybrid incorporate Quality Matters standards for assessments.

• Assessments must align to SLOs and enabling objectives from Stage 1.
Course Level Design

Stage Two – Determine Acceptable Evidence

Step 4

Record Stage 2 design question answers

Use the Baker College UbD Design Template taken from pg. 31 UbD Workbook. This includes recording all stage 2 assessment types.

Step 5 – Decision Point

Satisfied with Stage 2 answers?

All parties must agree with the responses to the Stage 2 design questions before moving to the next step in the process. If there isn’t agreement, move back to Step 2 of Stage 2 and repeat process. If there is agreement, move on to the next step in the process.

Step 6

Design assessment plan

Assessments should be formative at points during the course to assess student learning and progress toward student learning outcomes and summative at the end of the course. Use the information from step 2 to design detailed assessments. Add this information to the UbD Design template.
Course Level Design

Stage Three – Planning Learning Experiences

Step 1

Identify who needs to be at the table.

This is the work of the instructional designers. This is their area of expertise. Content experts and assessment experts should be used as needed for consultation. Instructional designers have the expertise to design the course learning experiences and assessment tools.

Step 2

Work through Stage 3 design questions

Use the Baker College UbD Design Template taken from pg. 31 UbD Workbook.

Use UbD design standards pg. 28

Ask the following Stage 3 questions:

• What do students need to acquire in order to be successful? What enabling knowledge (facts, concepts, principles) and skills (processes, procedures, strategies) will students need in order to perform effectively and achieve desired results?

• What inquiries and meaning making must they actively be made to engage in?

What activities will equip students with the needed knowledge and skills?

• What transfer must they practice and get feedback on?

What will need to be taught and coached, and how should it best be taught, in light of performance goals (stage 2)?

• Use the Rigor and Relevance framework from Step 6 of Stage 1 for appropriate instructional strategies and learning experiences.

• What sequence is optimal for engagement and success?

• For online and hybrid, use Quality Matters standards for engagement, instructional materials, and media.

• How will the work be differentiated without sacrificing SLOs? - this helps to optimize success of all.
Course Level Design

Stage Three – Planning Learning Experiences

Step 3 – Decision Point

All parties must agree with the responses to the Stage 3 design questions before moving to the next step in the process. If there isn’t agreement, move back to Step 2 of Stage 3 and repeat process. If there is agreement, move on to the next step in the process.

Step 4

Use the Learning Principles on page 113 - 121 of Schooling by Design as a guide. Use the Baker UbD Template.

Use, How People Learn as a guide.

Use the WHERETO model -

W - Ensure students understand where the learning experiences are headed and why.

H- Hook students in the beginning and hold their attention.

E - Equip students with necessary experiences, tools, knowledge, and know how to meet SLOs.

R- Provide students with numerous opportunities to rethink big ideas, reflect on progress, and revise their work.

E - Build in opportunities for students to evaluate process and self-assess.

T - Tailor the course to reflect individual talents, interests, styles, and needs.

O - Organize to optimize deep understanding as opposed to superficial coverage.

Use six facets of understanding:

1. Understanding as Explanation

2. Understanding as Interpretation

3. Understanding as Application
Course Level Design

Stage Three – Planning Learning Experiences

Step 4 – continued

4. Understanding as seeing things in Perspective
5. Understanding as having Empathy
6. Understanding as Reflective Self-Knowledge
   
   • Model learning experiences so they are in-depth not superficial. Plan for Uncoverage vs. Coverage
   
   • Use problem-based learning, authentic learning experiences, ill-structured problems, questioning, critical thinking, and high levels of application to ensure transfer. Identify media needs.
   
   • Align learning experiences to Quality Matters standards.
   
   • Align learning experiences to Rigor and Relevance.

   • Complete any design of assessments from the assessment plan in Stage 2.

   • Consider designing multiple assessments and learning experiences that all align to the SLOs so that instructors have a choice.

Add this information to Stage 3 of the UbD template.

Step 5

Identify instructional resources and materials to support learning experiences

Identify resources to introduce learning, resources to help students practice learning and get feedback, and resources to support assessments. Include media to support learning experiences and assessments. Use assessment information from Stage 2, Step 6. Align all resources for online and hybrid courses to Quality Matters Standards. Use the Baker UbD Template.
Understanding By Design (UbD) Process

Course Level Design
Stage Three – Planning Learning Experiences

Step 6

Map assessments from Stage 2 and learning experiences from Stage 3 to SLO matrix.

Using the SLOs and enabling objectives from Stage 1, map assessments and learning experiences from stage 3 to the SLO matrix portion of the Course Design Template (CDT). Include SLOs, enabling objectives, sequence, assessments, instructional strategies, learning experiences, and media. Look for alignment of all assessments and learning experiences to the SLOs and enabling objectives. This is where sequencing of the learning experiences takes place as the matrix is set-up on a weekly basis. See SLO matrix from Course Design Template completed in Stage 2, step 2.

Consult as needed with subject matter expert.

Align learning experiences and assessments to Quality Matters standards.

Align with Rigor and Relevance.

Step 7 – Decision Point

Do assessments and learning experiences align with SLOs and enabling objectives?

All parties (Instructional Designers & Subject Experts) review the SLO matrix from the CDT and agree on alignment of critical course elements, assessments, learning experiences, and technology to the SLOs and enabling objectives. Subject matter experts review the completed SLO matrix and give feedback. All must agree there is alignment to SLOs and enabling objectives before moving to the next step in the process. All stakeholders will approve.

Step 8

Develop course documents for online, hybrid, and f2f course

These include documents such as the syllabus, detailed course layout using SLO matrix, lesson plans, resources, instructional materials, assessment tools (rubrics), and media. This information will come
Course Level Design

Stage Three – Planning Learning Experiences

from the SLO matrix (CDT) and the UbD design document. The information should be detailed enough for a faculty member to teach the course from this document.

**Step 9**

**Build Blackboard course shells**

All courses will have a master Blackboard course shell

- Build the online master course in Blackboard, which will contain all materials from Step 8. This is the primary course from which the hybrid and on-ground courses will be built.

- Build the master online hybrid course in Blackboard using materials from the online Blackboard course.

- Build the Blackboard course for the on-ground face-to-face course. This Blackboard course will contain learning materials, media, and assessments, all materials from Step 8 and the online course.

Use Baker Online Course Design checklist and Quality Matters rubric to guide the course build in Blackboard.

Review completed courses against Quality Matters standards for online and hybrid courses.

**Step 10**

**Launch course(s)**

Preferably, this would be a small pilot, but our course model generally doesn’t allow this.

**Step 11**

**Collect and analyze data**

This should include the following data:

Level 1 (reaction) data from students regarding the course

Level 1 (reaction) data from faculty regarding the course

Level 2 (learning) assessment and evaluation data regarding student learning
Course Level Design

Stage Three – Planning Learning Experiences

Level 3 (transfer) ideally, we would collect data on how students are using the knowledge and skills in their work or furthering their education. See pg. 92 of Schooling by Design for longitudinal rubric and assessments.

Analyze all data to see what it tells us and use it to continually improve the courses.

Also collect and analyze process data:

Level 1 (reaction) data from all participants in the UbD process. Analyze the data to see what it tells us and use it to continually improve the UbD process.

Step 12

Revise course based on data, if necessary.