



Department of Biotechnology
Innovative Teaching Learning (Pedagogy) Report

Name of the Faculty	Prof. Prasanna Bhalerao
Class	FT311E (VI Semester 3 rd year)
Courses Taught	Bakery Technology
Academic year	2024-2025
Title of Pedagogy	Storytelling & Narrative-Based Learning
Objective:	To foster conceptual clarity, scientific reasoning, and real-world readiness in bakery technology by integrating narrative-based instruction, multimedia tools, hands-on experimentation, and cognitive anchors that simplify complexity and spark lifelong curiosity in food science learners.
Methodology	<p>1. Storytelling & Narrative-Based Learning</p> <p>I try to present dry fact but create contextual stories around ingredients, equipment, and baking history (e.g., “<i>Grainville</i>”, <i>artisan bread origins</i>, <i>NASA using HACCP</i>, etc.). Impact: Enhances student memory retention, builds emotional connection to the subject, and encourages curiosity. Because the student connects with the story in that situation. Once the connection is established there comes a time that the student is so involved that he or she starts teaching the teacher, which is an achievement for me.</p> <p>2. Multimedia-Enhanced Instruction (Audio-Visual Pedagogy)</p> <p>I actively use YouTube videos, equipment demos, and video analysis (Farinograph, Extensograph, packaging lines) embedded in my teaching. Impact: Caters to visual and auditory learners, brings industry machinery and lab testing to life for students. Infact I have seen that even if there is a topic which is important yet students would not focus I make sure that visuals are there to help me generate that interest for students. The best thing is when my students asks me to please replay the audio visual for them to understand the working of the equipment.</p> <p>3. Experiential & Practical-Based Learning</p> <p>I do emphasize hands-on experiments, home baking trials, and practical product evaluation, even using home kitchens labs as extensions of the lab. Impact: Reinforces theoretical concepts with real-world application, especially in dough behavior, ingredient functionality, and bakery defects.</p> <p>4. Analytical and Scientific Thinking via Data Interpretation</p> <p>I break down complex concepts like starch gelatinization, rheological graphs, equipment outputs (Farinograph curves, Extensograms, Amylograph trends), and even compositional charts of flour types. Impact: Promotes higher-order thinking, bridges science with culinary outcomes, and prepares students for R&D or lab testing roles.</p> <p>5. Mnemonics, Humor & Relatable Analogies & Industry-Integrated Learning</p>



	<p>From "funny mnemonics" to relatable examples (like comparing gluten to a balloon or Hookean dough to a spring), I try to make my sessions engaging, sticky, and student-friendly.</p> <p>Impact: Increases classroom interaction, reduces cognitive overload, and builds confidence in slow learners. I often reference current market trends, startup innovations, and industrial comparisons like Bakers Dozen, debates on the use of fortified products in baking (stone milling vs roller milling, MAP packaging, AI in bakery), giving your students exposure to real-world applications.</p>
Outcome	<ol style="list-style-type: none">1. Narrativization (Storytelling & Narrative-Based Learning): <i>Students connected emotionally with theoretical content, leading to improved retention, contextual understanding, and the ability to recall and explain concepts creatively.</i>2. Visual-Auditory Integration (Multimedia-Enhanced Instruction): <i>Through multimedia inputs, students gained multisensory exposure to complex equipment and industrial practices, enhancing comprehension, engagement, and curiosity in abstract or technical topics.</i>3. Experientialism (Practical-Based Learning): <i>Students translated theoretical knowledge into practical skills through hands-on trials, fostering scientific intuition, observational analysis, and confidence in independent application.</i>4. Data-Driven Reasoning (Scientific Thinking & Interpretation): <i>Students developed analytical skills by interpreting rheological curves, equipment readouts, and compositional charts, enabling evidence-based decision-making and preparation for research or quality control roles.</i>5. Cognitive Anchoring (Mnemonics, Humor & Industry Integration): <i>Students retained complex terminology and frameworks with ease by engaging with mnemonics, analogies, and industry-based examples, thus improving classroom interaction and concept application in real-world scenarios.</i>
Glimpses	