**Chat GPT example of a structured abstract:**

**Title:** Analyzing Food Loss and Waste in the Retail Sector: Measurement, Causes, and Mitigation Strategies

**Structured Abstract:**

**Background:** The retail sector plays a pivotal role in the food supply chain and, consequently, contributes significantly to food loss and waste (FLW). Addressing FLW in this sector can lead to economic savings and sustainability benefits.

**Objective:** This research aims to comprehensively measure FLW in the retail sector, ascertain its primary causes, and assess the effectiveness of potential mitigation strategies.

**Methods:** A quantitative survey was conducted across 100 retail outlets, spanning supermarkets, hypermarkets, and local grocery stores over 18 months. The study was complemented by in-depth interviews with store managers and staff. Data analytics tools were utilized to categorize and quantify the sources of FLW.

**Results:** The retail sector was found responsible for 15% of total FLW, with perishable goods accounting for 70% of this waste. Key identified causes included overstocking, inadequate storage, and consumer purchasing behavior. Implementing a just-in-time inventory system reduced waste by 4%. Additionally, dynamic pricing strategies and customer awareness campaigns led to a combined waste reduction of 7%.

**Conclusions:** Addressing FLW in the retail sector requires a multi-faceted approach, targeting both systemic issues and consumer behaviors. Effective strategies can lead to reduced waste, economic benefits, and greater sustainability.

**Informative Abstract**

**Word-Problem Solver for Engineering Thermodynamics**

**What is being presented:** The purpose of this e-learning tool is to increase retention rates for difficult STEM courses by improving students’ word-problem solving skills. We are developing an online tutorial software called Pathway. The first course that Pathway will be applied to is the most difficult course in Mechanical Engineering, which is Thermodynamics. Pathway takes the place of tutors, TAs, or professor office hours by providing as much help as the student needs to master their most difficult course. Pathway is not to be confused with an “equation solver” such as WolframAlpha.com, which require students to already know which equations to use. That is precisely the gap that Pathway fills. With Pathway, students can finally try what-if scenarios, create new problems from scratch, and more efficiently develop their problem-solving skills. Students will be able to get the productive practice they need for exams, with 24/7 convenience via any web-enabled device.

**Why is it important:** Studies show that only 60% of students that pursue a STEM degree persist to degree completion. For Mechanical Engineering the degree completion rate is lower, 49%. Thermodynamics, a required course for mechanical engineering, is also known as its weed-out course. There are 50 thousand U.S. students that take Thermodynamics each year. About half receive a grade of D or F in Thermodynamics. There is a national need to increase the quality of engineering education and its retention rates.

**What have others done:** An early version of Pathway was tested at a research I university. About 120 students used the tool while 480 did not. The group that used the tool averaged a letter-and-a-half grade higher on each of the three midterms and the final exam. All 600 students took the same exams. Students that used the tool also finished their homework much faster than those that did not. These results were presented at a conference and published in a journal of engineering education.

**What is different:** The earlier version required that a set of static homework problems be programmed weekly to mirror regularly assigned homework. This was a tedious task and prevented the tool from being used by other universities that assigned different sets of homework. This new version solves that problem by allowing students to create their desired word-problems. By specifying a word-problem in Pathway, it immediately shows which equations to use, why to use them, and shows various paths that lead to the right result.

**What are the findings/results:** In the full paper we will present the tool and discuss how it works and how students use the tool to solve their word-problems. The first real application of the tool will take place during the entire spring semester 2017. The results will be measured by comparing the retention rate at the end of spring 2017 semester against prior semesters at several universities. The applied learning cognitive theories will also be discussed in the full paper.

**Informative Abstract**

**Graduate Student Online Professional Development Resource**

**What we are presenting**. We are presenting a framework for an online resource that will prepare graduate students to competitively transition from graduate school to the job market. Such a resource is expected to be of interest to individuals that are considering entering, changing, or promoting within a career. The career sectors that are covered include industry, academia, government, and non-profit organizations.

**Why it is important**. This is important because the job market is highly competitive and a customizable graduate education can be used to prepare the graduate for such a market. Unique to each graduate student are faculty-student relationships, institutional priorities, disciplinary paradigms, and the needs and characteristics of the student. These individual differences create opportunities and challenges as students pursue their degrees, professional development, and prepare for future careers.

**What other have done**. Related websites such as Monster and Careerbuildier provide suggestions and examples on how to write standard resumes, CVs, and cover letters for various career sectors. Websites such as Glassdoor and Careerbliss offer anonymous content posted by employees about a company’s profiles, careers, salaries, company culture, and employee comments. However, there does not seem to be a resource dedicated to the professional development needs for graduate students.

**What is new and different about this study/project**. This resource will offer knowledge and skill activities that are designed to create career-building behaviors. Each different career sector has disparate drivers, which the graduate student should be made aware of far in advance. Such information allows students to strategically plan and build a foundation for a highly competitive applicant portfolio that continues to evolve as the applicant experiences professional growth.

**What are expected results**. A few examples of what we expect students to develop from this resource are: career search strategies, network mapping, creating and managing one’s online professional identity or brand, application materials, workplace skills, career management skills, understanding business organizational cultures, interdisciplinary teamwork, corporate environment skills, and methods to balance work and family life. The paper will discuss each component of the framework along with assessments of the online environment for graduate student professional development. Examples of the student learning outcomes, interactive learning activities, reflective activities, and pre- and post-assessment methods will be discussed. A number of best practices in graduate education, including academic and social integration, are incorporated in the online professional development model and will also be discussed.

**Structured Abstract**

**Title:** Experiences of Students from 1890 Historically Black Land-Grant Institutions in a

Pre-Graduate School Mentoring Program

**Purpose**

The purpose of this descriptive case study was to explore the experiences of underrepresented minorities (URMs) from 1890 historically black land-grant universities who participated in a mentoring-based pre-graduate school mentoring program at a predominately white 1862 land-grant doctoral university with highest research activity.

**Design/methodology/approach**

Expectancy-value motivation and self-efficacy variables were assessed using a questionnaire. Participants were also asked open-ended questions as a guided reflection after participating in the program.

**Findings**

Findings indicated the following: 1) participants’ expectations for participation in the Pre-Graduate Summer Mentoring Program (PSMP)were met, 2) participants’ felt they would be supported if they chose to pursue a graduate degree at the predominately white institution (PWI), 3) participants reported that after attending the PSMP they felt more efficacious to apply to a graduate program at a PWI, 4) some participants intended to apply for a graduate program at this PWI, and 5) four categories of positive program features emerged from the results: i) information gleaned, ii) program enthusiasm, iii) activities/workshops, and iv) networking opportunities.

**Originality/value**

This pre-graduate program is unique because of its partnership between a predominately white 1862 land-grant university and several historically black 1890 land-grant universities.

**Key words:** underrepresented minorities, STEM, mentoring, graduate students, motivation

**Article Type:** Research paper