

# Lesson Plan for MSSW 668

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## Lesson Overview and Context

- **Course Title:** Program Evaluation In Social Work
- **Course Level:** MSSW
- **Modality:** Online, 1.5 hour synchronous class
- **Lesson Topic:** Quantitative Data Analysis
- **Placement Within Course:** Week 11 of 14

## Learner and Context Description:

- Who are your learners?
  - Graduate social work students at the University of Louisville. Students are taking this course asynchronously online. Students are in their specialized year of coursework, MSSW 668 sits within their second year and most students are set to graduate in May. Students are commonly working professionals with families and other responsibilities.
- Any relevant contextual considerations?
  - MSSW 668, Program Evaluation in Social Work, is a required course in the Master of Social Work degree program. The course’s assignments build on each other, going from needs assessment to logic models to surveys to evaluation, including quantitative and qualitative analysis. This session focuses on quantitative data analysis, with an emphasis on how to find the common measures, such as percentages, mean, median, mode, and range. We also touch on the purpose of analysis from a social work perspective, including how to center equity.
  - This online synchronous class session is not mandatory. An alternative assignment can be completed if the student does not attend this class session.

## Learning Objectives

By the end of this session, students will be able to:

Learning Objective	Course Learning Objective	CSWE Competency
1. Apply social work values, such as equity, client-inclusion, and intervention improvement, to data analysis.	<ul style="list-style-type: none"><li>• Recognize and value the ways in which diversity and difference characterize and shape all human experience including the process of research.</li><li>• Understand and utilize program evaluation and other research methods to assess</li></ul>	<ul style="list-style-type: none"><li>• Competency 2: Advance Human Rights and Social, Economic, and Environmental Justice</li><li>• Competency 9: Evaluate Practice with Organizations and Communities</li></ul>

	effectiveness and develop improvements to programs and other interventions.	
2. Identify the two main categories of data and how to describe them.	<ul style="list-style-type: none"> <li>• Apply their knowledge of quantitative and qualitative research methods in program evaluation.</li> <li>• Use evaluation research to inform and improve practice, policy and service delivery.</li> </ul>	<ul style="list-style-type: none"> <li>• Competency 4: Engage in Practice-informed Research and Research-informed Practice</li> <li>• Competency 9: Evaluate Practice with Organizations and Communities</li> </ul>
3. Calculate percentages and measures of central tendency.		
4. Explain how quantitative findings inform programmatic changes.		

**Instructional Content and Learning Activities**

<b>Time</b>	<b>Activity</b>	<b>Description</b>	<b>Purpose</b>
2 min	Welcome	The session is being recorded, you will be able to review the lesson at your own pace or at a later date. You will also be able to utilize Closed Captions if watched at a later date.	Accessibility
10 min	Introductions	<ul style="list-style-type: none"> <li>• Name/Pronouns</li> <li>• If you could instantly become fluent in any language, which would you choose?</li> <li>• Scale 1-10, rate your confidence level when it comes to quantitative data analysis.</li> </ul>	Asking students to rate their confidence at the beginning of class achieves a few goals. One, it helps the instructor to know where the class is at in their knowledge of quantitative methods. Two, signals to the class that it is ok to not be at a confident level. Three, creates psychological safety, that others also might have anxiety around this topic. These three aims connect to andragogical foundations that help establish everyone’s belonging in the class, to hopefully experience it as an open, empathetic, and learner-focused space.
5 min	Learning Objectives	<ul style="list-style-type: none"> <li>• Review learning objectives</li> </ul>	Reviewing the learning objectives creates a clear goal and purpose for the class session.
10 min	Brief Lecture + Discussion - Taking Surveys	<ul style="list-style-type: none"> <li>• The survey is a brief version of the Big Five Personality Inventory, made into a short version by Rammstedt et al. (2013).</li> <li>• Discussion about surveys as instruments:</li> </ul>	The data we analyze is only as good as the measures used to collect it. Who created the survey, how they tested and validated it, and whether it has been updated over time all affect the quality of the data. Applying a social work lens to data, particularly as it relates to client services and

		<ul style="list-style-type: none"> <li>• What was your experience taking the personality test?</li> <li>• Did it feel like it would be useful?</li> <li>• Accurately capture your traits?</li> <li>• Did the language seem biased?</li> <li>• Do you trust the score it gave you?</li> <li>• Who do you think created this instrument?</li> <li>• Does it matter that it is validated by research?</li> </ul>	<p>outcomes, increases the likelihood that analysis will reflect and respond to the needs of underserved communities, rather than reinforce existing inequities.</p> <p>Adults learn best by connecting new information to existing experience. Opening with reflective questions about a survey students just completed brings the human experience to the data table. It also names how bias enters the conversation, that even a well-validated survey was created by researchers who may or may not reflect the communities being measured.</p>
5 min	Brief Lecture - AI Corner	<ul style="list-style-type: none"> <li>• AI is a powerful tool for data analysis — use it.</li> <li>• You can drop a dataset into an AI agent and get answers quickly. That part is easy.</li> <li>• The harder, more valuable skill is knowing how to read, interpret, and question what comes back.</li> <li>• In the workplace, you'll be in rooms where you have to think on your feet — meetings, discussions, decisions made in real time. If AI has been doing your thinking for you, it will show.</li> <li>• Data and policy decisions have long been shaped by people who don't reflect the communities most affected. If you carry lived experience that's often missing from these conversations, being able to read the data, challenge assumptions, and speak with authority isn't just a career skill — it's an equity issue. That's how you create real change for your organization, your staff, or the people you</li> </ul>	<p>Spending time talking about AI and how to use it speaks to the andragogical principle of motivation. Ultimately, the plea to use AI as a responsible tool is an attempt to bring ethics and authenticity to the forefront. Social workers are often in conversations where we need to make decisions that are not cut and dry. Exercising judgment and restraint also demonstrates social work values.</p>

serve. Don't hand that power to AI.

10 min    Review of Main Concepts – Types of Data

- “Write these two words down – collect + report.” Keep these in mind as your goal for this assignment.
- Data is the information we collect through surveys, interviews, and other methods. Not all data is the same — some data puts people into groups (like male/female), while other data measures amounts (like a score of 22). The type of data we have determines which statistics are appropriate to use. For our purposes, there are some common approaches.
- Categorical (non-numerical) variables vs continuous variables
- Some pieces of information are grouped into categories, gender and race. They must be coded into numbers to allow for easier analysis.
- Other data can be real numbers that have meaning in relation to each other, eg. larger numbers indicate more.
- Describing Data
- Mean – average. Add up all the scores and divide by how many scores there are. The mean is pulled by outlier data points.
- Median – exact middle score when put in order.
- Mode – most common number. Unique because can also be used for categorical data (non-numerical).
- Range – distance between high and low.
- Tells you if there is a lot of diversity in the respondents.

It is important to provide a brief overview of the main concepts and their relation to each other. The class session is designed to review a little bit of material and then open up for discussion.

		<ul style="list-style-type: none"> <li>Percentages – how big that category of data is within the whole set</li> <li>Ask if students have seen these concepts before and if there are questions or clarifications needed.</li> </ul>	
10 min	Review of Main Concepts – Analysis	<ul style="list-style-type: none"> <li>Analysis means taking the information you collected and making meaning out of it. The data might confirm what you expected, or reveal something surprising — including gaps you didn't know existed. Financial stakeholders are interested in data analysis because they want to know if money is being used effectively and efficiently. It is essential to bring an equity framework to the analysis, to name gaps and opportunities.</li> <li>Service providers also find data presentations helpful to see how their work is positively impacting clients and furthering the program's goals and mission. Ethical social work practice doesn't just rely on what we think might be true about services and outcomes — we must measure it to validate that interventions actually work for the population being served. This protects both providers, who can demonstrate they are delivering effective services, and clients, who deserve services that are known to help.</li> <li>Clients deserve to see data too. Surveys give clients a chance to share their experience and suggest improvements. Ideally, once data is collected, analyzed, and changes are made, the</li> </ul>	The reflection questions in this section are designed to illuminate how data is used to harm communities, leave them out of the conversation, limit resources, and tell a different story than the communities themselves might tell. Adult learning theory pushes us to bring lived experience into the lesson plan to ground the content, make it real and spotlight where more diverse voices are needed.

program loops back to clients to measure again. Program improvement should happen in an ongoing and iterative way.

Discussion Questions

- *When you look at a dataset, the design is based on whose worldview. How close is that to your own?*
- *When have you seen numbers used to dismiss something you knew to be true from lived experience?*

30 min	Exercise - Calculation Time	<ul style="list-style-type: none"> <li>• First, let's review the columns given to you on the practice data set.</li> <li>• Then calculate each section together.</li> <li>• Briefly discuss of what these might mean compared and what we would do next.</li> </ul>	<ul style="list-style-type: none"> <li>• The calculation section of the lesson plan is designed to scaffold your learning. We will talk through the spreadsheet columns. Then, I will demonstrate how to find each value. Next, we will calculate the next value as a group. Then we will move to individual practice. In adult learning, it helps to build confidence when learning a new skill. Doing the calculations incrementally and as a group, rather than trying it all independently, will reduce intimidation and overwhelm.</li> </ul>
10 min	Demonstration Using Excel	<ul style="list-style-type: none"> <li>• Excel is widely used in social service settings, making it a practical and relevant tool for this course. A pre-recorded demonstration video with narration and step-by-step instructions will be provided after the session.</li> </ul>	<ul style="list-style-type: none"> <li>• Because students come in with varying levels of Excel experience, a recorded format allows everyone to learn at their own pace, pause when needed, and review as needed. An Excel Cheat Sheet will also be included as a quick reference.</li> <li>• These resources are designed to reduce barriers to the technical content and support a range of learning needs.</li> </ul>
20 min	Q & A	<ul style="list-style-type: none"> <li>• About data analysis or the upcoming assignments.</li> </ul>	<ul style="list-style-type: none"> <li>• Unstructured time allows students the opportunity to bring forward any questions or comments not directly addressed.</li> </ul>

5 min	Closing Survey	<ul style="list-style-type: none"> <li>Please enter a number in the chat of your current confidence level with data analysis.</li> </ul>	<ul style="list-style-type: none"> <li>Ask students to rate their confidence level in the chat. By asking students to rate themselves again, it both demonstrates their learning to themselves, but also to the instructor. I can gauge whether the learning objectives were met by evaluating if students' ratings have gone up.</li> </ul>
2 min	Teacher Feedback	<ul style="list-style-type: none"> <li>Ask students to complete feedback survey on teaching effectiveness in BB.</li> </ul>	<ul style="list-style-type: none"> <li>Soliciting feedback on teaching effectiveness assists in reflection and growth.</li> </ul>

### Inclusive and Equitable Teaching Strategies

This lesson includes intentional strategies to support diverse learners, such as review of equity and AI relevance and implications, encouraging discussion rooted in lived experience, and connecting this new content to the discussion. The lesson promotes belonging by asking for pronouns at the beginning and engaging in an icebreaker activity. Furthermore, I mention that the lesson is being recorded for future review, can be viewed with closed captioning, and includes a review of Excel as a recorded video to allow for self-paced learning.

### Assessment of Learning

Learning Objective	Activity & Assessment Strategy	Type
1. Apply social work values, such as equity, client-inclusion, and intervention improvement, to data analysis.	<ul style="list-style-type: none"> <li>Discussion around AI use, how surveys are created, context for data analysis.</li> </ul>	Formative
2. Identify the two main categories of data and how to describe them.	<ul style="list-style-type: none"> <li>Confidence scale pre-lesson and post-lesson.</li> <li>The group and independent calculation exercises allow the instructor to observe student understanding in real time.</li> <li>Next week's graded assignment.</li> </ul>	Formative and Summative
3. Calculate percentages and measures of central tendency.		
4. Explain how quantitative findings inform programmatic changes.		

### Instructional Materials and Technology

I designed this lesson to use current technological tools, such as Canva, Claude AI, and Blackboard.

This lesson uses:

- Practice Dataset provided by Dr. Seana Golder to allow for practicing calculations on a smaller scale dataset.
- Class assignment provided by Dr. Seana Golder to ensure lesson content directly prepares students for the upcoming quantitative data analysis assignment.
- Excel Cheat Sheet provided by Dr. Seana Golder via previous doctoral student to guide students in the needed excel formulas and application.
- Survey administered via Claude to model ethical and practical AI use for instructional purposes.
- Presentation made in Canva to provide engaging and easy to read slides that present the information in a visual manner.
- Excel screen recording made in Canva to provide additional instruction available outside of class.
- Class held via Teams to allow for recording and use of closed captions if viewed later.
- All class session content uploaded into Blackboard under Week 11 to allow for information to be found and reviewed in an organized manner.

## **Reflection and Rationale**

### **Design Rationale:**

I designed this lesson build slowly, first by introducing the concepts, and then by performing the calculations together. I wanted to bring an equity framework into all sections. I wanted the lesson to be flexible enough to adapt the learners current understanding. I also wanted to provide resources for use after the session to allow for additional exploration.

### **Effectiveness:**

Based on feedback from Dr. Golder, it worked well to start where the students' current understanding is, which meant explanations of calculator calculations, not Excel calculations. I thought I did a good job of making the lesson relatable to lived experience and equity concepts despite the bulk of the content being technical application. Based on the students' confidence ratings from the beginning of class (average 3.19 rating) to the end (average 7.6 rating), their confidence did increase.

### **Future Adaptation:**

I could increase the areas for discussion on the concepts. I could arrange the students into pairs or small groups to share further in terms of what their ideas might be around what the data conveys, what they might analyze next, and its implications for program change. I would also practice teaching Excel to more groups of students. I need feedback on how to instruct differently in order to increase clarity on how to perform functions in Excel.

## **References**

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