



## Capturing student learning with thematic analysis

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### Abstract

**Aim:** This paper examines the best methods for employing thematic analysis to determine what 118 students in eleven distinct online teambuilding courses taken as part of an undergraduate management curriculum in 2011-2013 learned. There is a brief discussion of accrediting organizations, a critique of their assessment methods, and some suggestions for using thematic analysis more frequently as a primary or secondary indicator of student learning.

**Methodology:** All 11 classes in this sample were taught by the same professor at National University in California, USA (the author).

**Findings:** The primary findings of this study are that students who took a course in teamwork benefited greatly from learning the importance of writing a team agreement at the outset of a team assignment, as well as from conducting confidential peer ratings at the assignment's conclusion.

**Implications/Novelty:** The use of thematic analysis as a supplementary tool to the official, university-driven end-of-course exams may prove fruitful for some educators. Suggestions are made for further research and for popularizing the use of thematic analysis.

*Key Words:* Accreditation, Assessment, Stages of Team Development, Student Learning, Teambuilding, Thematic Analysis

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### INTRODUCTION

Colleges and universities invest a disproportionate amount of resources (time, money, and people) into evaluating their degree offerings. Most of these evaluations are necessary for the United States because they are part of a five- or ten-year review and reaccreditation process mandated by one of six regional accreditation bodies. Accreditation is an external and independent evaluation of an educational institution or academic department within an educational institution that is undertaken as a quality assurance process. However, regional differences in quality and expectations are substantial. While the WASC accredits schools in California and Hawaii, the North Central Association (NCA), which has much lower standards, accredits schools in 21 other states in the United States. For example, the NCA-accredited University of Phoenix has a reputation for producing graduates who need to prepare for the workforce.

The Association to Advance Collegiate Schools of Business (AACSB), Accreditation Council for Business Schools and Programs (ACBSP), and International Assembly for Collegiate Business Education are just some of the additional discipline-based accreditation bodies (IACBE). Because they claim to represent only the highest achievement standards regarding business schools, AACSB has earned the nickname "the gold standard" in business education. And "graduates from these business programs are supremely credentialed and, thus, most desirable to employers compared to non-accredited institutions" (AACSB website). The author remains unconvinced that an AACSB education results in a better quality business professional because no data supports this claim. Accreditation from the Association to Advance Collegiate Schools of Business (AACSB) seems to be more of a status symbol for business schools than a predictor of success for graduates in the workforce or as entrepreneurs.

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The focus on academic programs and their Student Learning Outcomes is a unifying factor in all of these accreditation procedures (SLO). It's what graduates of a given program are expected to have learned and practiced by the time they leave. SLOs are meant to symbolize comprehensive facets of conduct that incorporate various forms of education. Accreditation staff collaborates with faculty and administration to compile an in-depth self-study that details the unit's successes and failures in adhering to accreditation principles and standards. Further, a group of impartial peers will conduct a site review at the institution. The accreditation status of the institution's programs is determined after the respective Board of Commissioners, or equivalent, reviews the self-study, the report of findings from the site-visit team, and the academic unit's response to the report.

Despite the emphasis on student learning outcomes and the importance of accreditation, the students' voices are rarely heard. Despite having earned several degrees, including an Associate's, a Bachelor's, a Master's, and a Doctorate in Management from accredited institutions, I am unable to name a single student learning outcome that I remember from my time in higher education or that has helped me succeed in my careers as a United States Air Force officer, a human resources executive, a self-employed management consultant for fifteen years, and a full professor of business since 2004. I am confident that if we polled millions of other college grads around the world, we would get results that were just as naive and/or unimportant when it came to their perspectives on the effectiveness of student learning outcomes.

Accordingly, it's important to consider feedback from students directly rather than from an external bureaucrat whose interpretation of student learning may differ greatly from what the student reported learning. In qualitative research, "nothing is more important than using verbatim quotes," as stated by Guest, MacQueen, and Emily (2012). They went on to say, "A great thing about quotations is that their accuracy is rarely contested. Your sampling method and the feasibility of each participant will be scrutinized by a reviewer.

Stands for a larger category of people. But what can't be denied is that the participant actually made those statements. The quotations you use to support your argument are crucial to the success of your thematic analysis.

Quotations are the "stars" of qualitative research, as stated by Chenail (1995), who actually said this first. They connect the phenomenological world of the participant to the data summary and interpretation generated by the researcher, bringing the raw data - the words of the participants - to the reader. What follows is my attempt to identify themes in student feedback on the courses I've taught. This information was gathered from students' written responses to short-answer questions on the final exam and/or midterm. It was made clear to the students that they would earn credit for answering the question regardless of the content of their response. While it's not a new concept, the author questions whether or not there is ever any systematic analysis of direct student input when giving "free points" on exams for describing what students learned in a given course.

### **The Course**

The course description for MGT 422, an introductory management course for undergraduates, reads as follows: "An overview of the issues of quality applied to human resource management, topics include the delegation of authority and empowerment, work groups, team building, and employee involvement, reward/recognition, and employee morale, and the importance of written and oral communication skills in the delegation, sharing, and execution of work." In this study, students in each of the eleven online classes were asked to respond to two questions (or statements) that pertained to their progress in that class. Table 1 details which specific questions will be asked in which classes. It's important to note that the students' graded teamwork (a group research paper) counted for 30% of their overall course grade. A section of the team grade called the Confidential Peer Rating (CPR) can be worth up to four points depending on how students rate each other on a scale from 0 to 10 for their perceived contributions to the team project. After averaging the scores for each student team (students do not rate themselves), the results are rounded to the nearest whole number and entered into the grade book. The author thinks it's crucial to stress teamwork in the classroom so that students learn to think critically about issues from multiple perspectives. Moreover, and most significantly, it helps them prepare for working in a virtual team, which is the trend in many businesses today (Mueller 2012).

Table 1: Survey questions for MGT 422

MGT 422	1. Comment on the use of team tools (agreement, chat room, etc).
	2. Two things I learned and applied to my team at work or outside of school.

**CODIFICATION AND DATA REDUCTION**

These two subtopics, codification and data reduction, are so intricately interrelated that the author could not do one without the other. Kathleen and McLellan-Lemal (2008), Gibson and Brown (2009) and Guest et al. (2012) indicated one of the most critical components of applied thematic analysis is the codebook, where the observed meaning in the text is systematically sorted into categories, types and relationships of meaning [providing] an efficient baseline for moving beyond basic description to an exploratory analysis. Central to the codebook is the code label, a short, descriptive mnemonic (4-12 characters) that helps the coder quickly distinguish codes from each other (Guest et al. 2012). Based on this definition, Table 3 depicts the codebook for the first set of data gleaned from 11 MGT 422 courses, the largest set of data in this study, representing approximately 45 pages of single-spaced text from 118 respondents in this sample. As the reader will recall from Table 2 above there were two questions that students were asked at the completion of this particular course. The first regards the use of team tools; the second regards what the student reported as learning (that they can apply beyond academia).

Table 2: Codebook for MGT 422 courses

Q1 tools
TA (team agreement)
CPR (confidential peer rating)
CR (chat room)
Q2 lrn
TR (team-related including goal setting, common purpose)
LR (leadership-related including empowerment and delegation)
COM (communication-related including conflict management, feedback and meeting management not covered above)

Saldaña (2015) defined a theme as a phrase or sentence that identifies what a unit of data is about and/or what it means); whereas Ryan and Bernard (2003) reported that repetition is the most common technique to recognize themes, based on the premise that if a concept reoccurs throughout and/or across transcripts, it is likely a theme.

Data reduction was a particularly challenging activity for the author given the mass of data reviewed (again, 45 pages of single-spaced text from 118 respondents); and also that this is his foray into the fascinating world of thematic analysis. Miles and Huberman (1994) explained data reduction is not separate from analysis it is part of the analysis; and continued, The researchers decisions which data chunks to code and which to pull out, which evolving story to tell are all analytic choices in such a way that conclusions can be drawn and verified. Code frequency is the number of times a specific code was applied to a particular item or unit of analysis. Table 4 shows the code frequency for MGT 422 in this timeframe. These numbers were derived from a freelist of responses of the 118 respondents in this sample. The freelist was then color-coded for each code and reviewed for positive (+) vs. negative (-) (or lack thereof) comments.

Table 3: Code frequency for MGT 422 courses

Code	+	-
Q1 TA	30	1
CPR	23	3
CR	17	12
Q2 Lrn TR	56	0
LR	34	0
COM	26	0

An analysis of the above reveals the following emergent themes (below in Table 5). The lack of any negative responses in learning indicated to the author that perhaps an additional question could be asked: what did you NOT learn about that you wanted to?

Table 4: Emergent themes in MGT 422 data

1.	Student affinity for use of the team agreement was the most important team tool.
2.	The confidential peer rating was the second most important team tool.
3.	The team chat room was tertiary in importance as a team tool.
4.	Elements of teamwork and teambuilding were the most important learning.
5.	Elements of leadership were the next most important learning reported.
6.	Communication skills were the third most important learning reported.

A synopsis of the emergent themes is contained in Table 5. While no unpleasant surprises were contained in this data summary it did serve as a reminder of what I need to do next time I teach this course, namely, emphasize the proper use of team tools and continue to challenge students to learn from each other. Back to the quote the essence of thematic analysis. Table 6 lists a representative quote for each theme.

Table 5: Discussion summary of emergent themes

Theme	Summary of what Students Reported Learning
Team agreement tool	Helped student teams clarify their task, a research paper, including roles and deadlines.
Confidential peer rating tool	Kept students accountable to each other and minimized social loafing.
Chat room tool	Some technical difficulties were reported in the negative column in Table 4 but overall this tool was well liked. Some students reported preferring live (not asynchronous) option e.g., Skype. These synchronous options were encouraged in subsequent teaching of this course.
Teamwork learning	Focused on importance of shared goals; Tuckman (1965) model of team development (updated by Mueller, 2012); collaboration; and characteristics of high-performing teams.
Leadership learning	Importance of shared leadership; the symbiosis of this and teamwork.
Communication learning	Ideas for conflict management; recognizing and rewarding employees; and meeting management.

Table 6: Themes and selected corresponding representative quotes

Theme	Representative Quote
Team agreement tool	The team agreement is an excellent tool as it helps the team come up with answers and decide on a topic and subtopics for the research project. This provides the team with clarity to perform more precise research. Through roles and responsibilities the team leader assigns activity-based goals in order to complete the assignment successfully. The team agrees and commits to execute the assignmentthe goal is to submit on time, be thorough and strive for the highest grade possible while having fun!
Confidential peer rating tool	The CPR was a first for me. I really liked the chance to weigh in on team performance and although I did mark down a peer for missing a paper deadline I believe I was fair and graded how I would want to be graded given the circumstance.
Chat room tool	The group chat rooms helped us to keep up our regular contact and provide updates on our work. We were all able to provide feedback, have open-ended questions, and participate in active problem solving.
Teamwork learning	So far I have learned to embrace the (Tuckman, 1965) team development model more in my work life. I am stationed in one area and my team is spread out across many states. I dont get to see them all the time, but we speak on conference calls together. Learning about the model has allowed me to accept some of the friction that comes out of our meetings since these could become great ideas to help us get to our team goal.
Leadership learning	One idea I learned and applied at work is looking for ways to be a better leader. Im always looking for ways to improve, and this class has given some things to look out for. I continue to check my motivations when asking others to do something. This has been helpful
Communication learning	I have learned that open communication is very important in teamwork because it helps my team to achieve our goalalso helps us to determine each role and taskunderstand each others point of view, to share ideas, to express feelings and to articulate plans. I can apply open communication at workshare expectationstrust and support one another and respect one another individual differences.

Moreover, as Guest et al. (2012) so cogently stated, codes are not data themselves, they are metadata. It is therefore imperative to review example of text associated with the codes to maintain a feel for how people talk

[or write] about themes [use of team tools and what they learned in the course]. So, as usual, the numbers are far less meaningful than the stories behind them.

### KEY FINDINGS AND CONCLUSION

Upon reflection from this study the author offers the following sequential synopsis of thematic analysis as applied to student learning (and further implications for instructional design and continuous professorial development (Table 7). Isnt this model (Table 7) more useful than endless, third-party accreditation reviews based on student learning outcomes? Isnt this model more effective than quantitative end-of-course evaluations?

Table 7: Recommended six-step process for thematic analysis as applied to student learning

1. Question formulation
2. Data collection and freelistig
3. Codification and data reduction
4. Theme identification
5. Summative results and representative quotes
6. Consideration for course redesign and instructor improvement

### LIMITATIONS OF THE STUDY AND CONSIDERATIONS FOR FUTURE STUDY

Obviously, there are always more courses with different objectives that can be reviewed for replication and validation of the model shown in Table 7. Cluster analyses and similarity matrices could also be integrated to help understand the relationship between themes and between courses. Moreover, longitudinal follow-through with alumni will help to understand the actual learning/behavioral integration that has been solidified well beyond graduation. In any case, the author invites feedback to [jmueller@nu.edu](mailto:jmueller@nu.edu).

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