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To Teach or Not to Teach Online: Pedagogical Considerations About Distance Learning

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Abstract

The use of online course delivery has been promoted at many institutions of higher education as a way to provide greater access to students in a variety of degree programs. The lack of emphasis of online pedagogical strategies has left many faculty members to not consider teaching online, while administrators look for ways to increase revenue through enrollment with limited classroom space on campus. In this paper, the reasons faculty who have taught not online are explored and examined, while providing insight into the motivations of teaching online that could lead to increased participation within distance learning frameworks. Currently, universities across the globe are continuously challenged to provide increased opportunities to non-traditional students without increasing tuition for students or the overall operating budget. As most non-traditional students are not able to attend their classes in a full-time status, many universities are now encouraging and developing a strong distance education program across their institutions. Although distance learning does in fact provide non-traditional students the opportunity of higher education the integrity of university must not be lost, and the following case study of a Hispanic Serving Institution in the Southwest United states is a good example of how universities must consider the consequences and not just the benefits that online teaching has to offer.

Keywords: Teaching; Online; Faculty; Attitudes; Distance learning.

1. Introduction

The University of Texas at El Paso (UTEP) is located just a few hundred yards from the U.S.-Mexico border, in the world's largest metropolitan area on an international border. The University of Texas at El Paso is also uniquely located near Ft. Bliss, one of the major army bases in the United States. UTEP, which serves a regional constituency of more than 1.2 million people in this area, is changing the face of higher education, with its dual mission of providing access to higher education to the region's residents and achieving excellence in teaching, research, and service.

During the last decade, UTEP has experienced a sizable growth in student enrollment. In the fall semester of 2007, the student enrollment totaled 20,154 and in the fall of 2017, that number had increased to 25,078, an increase of 24.4% in just ten years. Due to the university's rapid enrollment growth and its pressure to transition to a top-level research institution, instructional alternatives are being implemented. The need to accommodate a larger student population has created a tension between increased course offerings and teaching loads for full-time faculty. As other universities have around the country, UTEP has adopted distance learning strategies in the form of online courses and programs for students at all levels. The increased access to technology by students across the region allows the university to promote distance learning opportunities with much less difficulty. From an economic perspective, employing a technology team to design online courses and having existing faculty teach them allows for more efficiency and at times, greater course enrollments.

Academic Technologies (AT) at UTEP is one such team. Academic Technologies (AT) is committed to the advancement of The University of Texas at El Paso's (UTEP) teaching mission by integrating innovation and creativity in order to enhance instructional and curriculum development, to design new learning environments, and to leverage the use of technology to achieve academic and research excellence. The organization is fundamentally interdisciplinary, project-based and entrepreneurial, as staff members work in teams with faculty and share their respective technical and pedagogical expertise. The group provides design, development and implementation opportunities to enhance online learning via a Learning Management System (LMS) in order to accommodate the needs of all students. Since UTEP has adopted this mode of learning, it has successfully evolved into a full-fledged learning experience of its own. A survey of classes from the spring of 2018 lists over forty (40) varied disciplines engaging in 100% online classes. Yet this growing teaching phenomenon is not equally accepted by all current faculty.

Not only is UTEP's geographical location distinct, the student population is as well, as most students can be defined as non-traditional students, an approximate estimate of 40% of the total student population (Kolenc, 2010). Non-traditional students are defined as students who work full time, go to school part time, are often older than 25 years of age as undergraduates, have children or have delayed going to college (Kolenc, 2010). In addition, UTEP's Talent Expansion Program lists the student population profile as being 98% commuter, 84% employed, 19% International students, 80% Hispanic, and 50% first generation university students. The university is continuously challenged to provide increased opportunities to its non-traditional students without increasing its operating budget.

In the fall of 2017, UTEP enrolled over 25,000 students, more than 80% of whom are Hispanic, mostly of Mexican-American descent. More than 84% come from El Paso County; another 9% are Mexican Nationals, who commute daily from homes in Ciudad Juarez. Approximately 55% of UTEP's students are women. Half of the University's students are the first in their families to attend college. Combined with the commitment to access represented by these demographics is the excellent education these students receive. UTEP regularly receives national recognition for the education it provides its students. According to *Hispanic Outlook in Higher Education* magazine, for example, UTEP ranks among the top three universities in the nation in educating Hispanics. UTEP was also one of only 20 schools in the U.S. recognized for creating "a campus culture that fosters success" by the National Survey of Student Engagement.

Currently, UTEP is continuously challenged to provide increased opportunities to its non-traditional students without increasing its operating budget. As most non-traditional students at UTEP are not able to attend their classes in a full-time status, the University is now encouraging and developing a strong distance education program across the institution. Although distance learning does in fact provide non-traditional students the opportunity of higher education the integrity of university must not be lost, and UTEP must consider the consequences and not just the benefits that online teaching has to offer.

2. Literature Review

Living in an age where obtaining a higher education degree is no longer an option, but a determinant of social mobility, which in light of ever increasing governmental debt, the importance of obtaining an advanced degree has become even more salient to the average American (Shea, 2007). This has been seemingly evident with an increased number of college enrollments in higher education institutions. With cost and accessibility in question many are now turning to online education (Martin and Bolliger, 2018). As of the fall of 2017, an estimated 6.35 million students reported taking at least one online course, which is 31.6% of all students enrolled in higher education (Babson Survey Research Group, 2017). This number increased by 560,000 students in one year and is expected to grow at this rate moving forward. An estimated 90% of higher education institutions are now offering online education (Tallent-Runnels, 2006).

For every social critic who warns of the dangers of technological ubiquity in all corners of our lives (Postman, 1993), there are those who extoll the virtues of technology's pervasive grip on our culture and our future (Benkler, 2007; Kelly, 2017; McAfee and Brynjolfsson, 2017). Given that technology is ever-present in most aspects of modern society, it is no wonder that its role in education is as prevalent as it is in other environments. From works such as Skinner (1968) groundbreaking *The Technology of Teaching*, educators and researchers alike have been interested in the link between technology and education. This interest has been manifested in a variety of modalities and delivery methods, ranging from television to filmstrips to audio recordings (Ferster, 2014). While the different technologies and delivery systems have resulted in varying levels of success, educational technology has remained of vital interest to theorists, researchers, and educational practitioners alike from the academic profession.

The Internet is arguably the most prevalent of all current technologies, connecting users to resources and information that was unthinkable even just a generation ago. Given its role in connecting distant points across the globe, it makes sense that its role as an educational delivery method is frequently explored. A leading technology in online education is the Learning Management System (LMS)—which includes those systems that allow educators to organize, create, and deliver educational content to students in a usable recognizable format. While some educational technology theorists have decried the limitations and drawbacks of these systems (Watters, 2014), LMS's still represent the primary method of delivery for online and mixed modalities. In this exploration of empirical research regarding course delivery modalities—face to face (F2F), technology-enhance, online, and blended or hybrid, two primary trends have been identified. The first trend was research that examined student and instructor perceptions concerning delivery modes. The second trend included studies that explored the effectiveness of the different delivery methods.

Student perception is important because researchers have found that in order to design effective instruction for both F2F and online modalities that instructors must understand student perceptions (Wright, 2017). A good starting point from the student point of view is how perceptions influence student decisions toward a given modality. Tichavsky *et al.* (2015), have explored why students chose the delivery methods that they did in the first place, finding again that student perceptions are vitally important in these decision-making processes. Tichavsky *et al.* (2015), found that most students will choose F2F classes over online or blended, but this choice is most likely based on stereotypes of what online classes are like rather than first-hand experience with that modality. Badri *et al.* (2016), found that student perceptions about ease of use of online educational environments and usefulness influenced student decisions about taking an online course. Robinson (2017), explored how universities can use student perceptions to influence their acceptance of online courses, finding that universities need to leverage positive student experiences within online courses to help influence other students to choose the same modality. This is tacit acknowledgement that student perceptions often override concrete experience when choosing modalities.

In regard to effectiveness, several studies (Terras *et al.*, 2012; Todd *et al.*, 2017) found that blended courses, where the F2F is augmented by online instruction, was the most effective delivery method. Likewise, in their study of student collaboration in both online and F2F environments, Tutty and Klein (2008) found that either method was effective, though it ultimately depended on the structure of the collaboration. Hizer *et al.* (2017), in their comparison of the efficacy between F2F and online environments within a supplemental instruction situation, argued that both are equally effective when helping undergrads in need of additional instructional support.

Despite increasing enrollment numbers, one-third of academic leaders believe that learning outcomes for online education are inferior to that of a traditional education (Robinson, 2017). Although the reality of achievement has been shown to be equitable, it may be a matter of attitude and perception that hinders more wide-scaled adoption of online teaching by faculty. While many see online education as an alternative paradigm, some see it as an end to an era in academe (Sammons and Ruth, 2007). With legislators generally making budget cuts for higher education, colleges and universities throughout the United States are now being forced to implement cost saving education alternatives (Parker, 2003), which include exploring online delivery of courses and programs and an increased emphasis on blended learning.

Online teaching is, however, a labor-intensive service (Goodyear *et al.*, 2001). If online courses are continually chosen over traditional face-to-face (F2F) courses, governmental funding may be decreased (Robinson, 2017). This would not only change the nature of university education, it could deprive scholars of the chance to earn a decent living and build their curriculum vitae (Dutcher, 2011). Online courses may be the new pedagogical "cash cow" as they may increase class size, while eliminating the cost of having a physical classroom (Brown and Green, 2003). Conversely, positive factors for faculty include professional advancement, flexible and convenient hours, and benefits associated with novelty and innovation (Brown and Ramasamy, 2017) while providing accessibility, flexibility and educational opportunity for students. To fully comprehend this accelerating transformation in education its benefits and effectiveness must be comprehensively analyzed.

3. Methodology

The purpose of this study was to understand attitudes of faculty at UTEP towards teaching classes online in order and to help determine ways to improve eLearning pedagogy, as well as online course and program development. The goal was to use the survey responses in order to determine the issues the faculty perceive as the inherent struggles or critical issues with teaching online, as well as identifying what resources UTEP faculty need to develop online courses. This study used a survey method to collect quantitative and qualitative data. Additionally, an effort was made to identify what resources, pedagogical and technological, faculty members need in order to develop online courses. Some of the questions included the rating of subjects' knowledge, experience, and comfort level in using technology such as Learning Management System (LMS) and other software used in online and blended instruction. Because the participants' identity remained anonymous, they were not vulnerable to coercion or undue influence in relation to this study.

This report will analyze and address the responses of faculty who completed a survey as part of a "Faculty Who Have Not Taught Online" research project. These responses demonstrate the preconceptions about distance learning varied amongst faculty who have not necessarily engaged in the online teaching possess. The overall objectives of this report are the following:

1. To learn and understand preconceptions about online courses from faculty who have never taught such courses.
2. To identify faculty's teaching priorities and how they are affected by distance learning.

To better meet the growing needs of the university, an open and closed ended survey was developed to address perceptions about online teaching and learning. The survey addressed the needs of teaching faculty while providing insight to the future direction, resource distribution and priorities of the university. An initial interest invitation email was sent out to 343 full-time tenured or tenure-track faculty at UTEP who had not taught online, of which 172 indicated they would participate in the data collection. The link to the survey was then distributed to a total of 172 participants via email, a response rate of approximately 50%. The faculty who participated represented a variety of disciplines including liberal arts, education, health sciences, science and engineering. The survey contained 23 open and closed ended questions and allowed for additional comments (see questions listed as part of Appendix 2).

The sample of participants focused exclusively on faculty who had not previously taught online classes. Faculty who did have previous teaching experience with online courses were excluded from survey participation. Participant demographics were distributed across categories including age, gender, academic rank (although academic rank could be implied with years of teaching), computer skill level, and the number of students in previous participating online classes.

The study was comprised of open-ended questions, rating scales, five-point scale responses, and multiple-option responses. The survey sample was limited to University of Texas at El Paso (UTEP) tenured and tenure-track faculty who had not taught online. This population included male and female participants of various groups, backgrounds, ethnicities, and ages. The survey invitation was sent out to roughly 350 potential subjects.

While the group of potential participants was selected intentionally, participants' identities remained anonymous. Participants took the survey by invitation only. The survey was comprised of between nine to thirty-six questions based on "if yes or no" response logic and remained open for a maximum of three weeks. Participants answered between nine to thirty-six questions, depending upon the response hierarchy in a survey designed not take longer than 15 minutes to complete. This judgment sample was selected in an effort to understand why UTEP

tenured and tenure-track faculty members have chosen not to teach online courses and if there were any factors that would encourage them to consider doing so in the future.

This report, however, focuses on organizing, coding and later analyzing the survey questions responses from participating faculty, which were compiled and analyzed. The complete list of survey questions and coded responses can be found in Appendix 2. Other ways in which online teaching can enhance pedagogy. The analysis was divided into a series of seven columns. The initial two columns displayed the questions and the responses pertinent to each question. The remainder of the columns consisted of categories including the following: general codes, sub-codes, positive or negative interpretations of the responses, the needs mentioned by the faculty and the final column codes the pedagogical goals of a specific set of questions strictly related to teaching pedagogy. Each response was coded under these five categories.

4. Results

Coding the transcript using the various code categories listed in the methodology section further clarifies and identifies ongoing themes related to problems and benefits of online teaching. The results portion of this report will attempt to address the first objective, which stated the following: To learn and understand preconceptions about online courses from faculty who have never engaged in them.

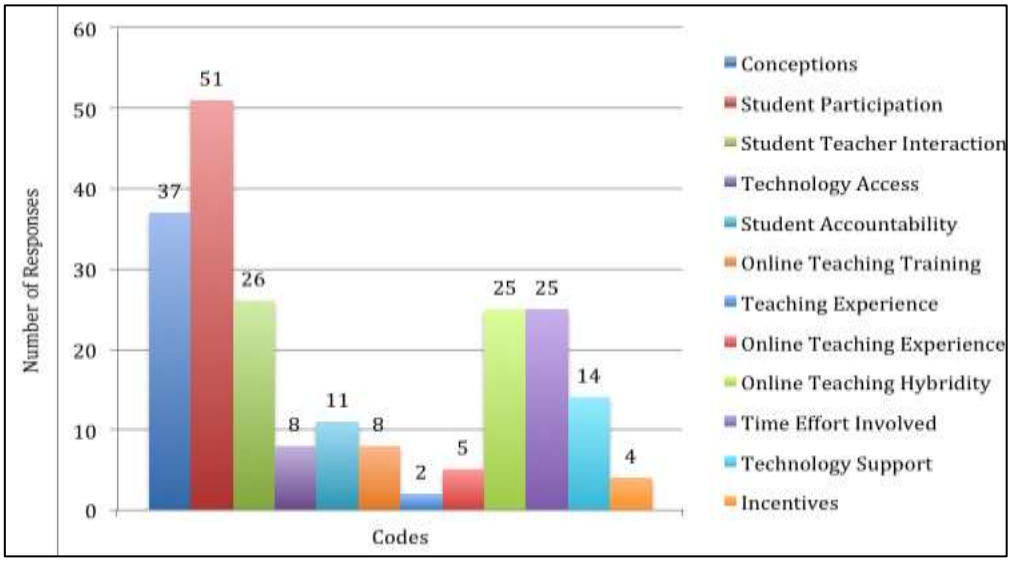
Although the objective specifies faculty who have never engaged in online teaching at UTEP, it is important to point out that many of the faculty interviewed did have prior online teaching experience outside of the university. Furthermore, the objective is carefully written using neutral vocabulary to encompass a more general scope of the responses. Using the word "preconception" is essential as supposed to using a word like "misconception" because not all ideas about online teaching are misguided or unjustified. As clarified in the methodology section, the responses are later coded to include more "positive" or "negative" inclinations, while the objective remains neutral.

The results will be broken down into two sections. The first section will provide a general quantitative breakdown of the how the codes were distributed throughout the transcripts. The second portion, however, will venture in a more in-depth qualitative analysis of responses and will identify reoccurring themes. The quantitative portion of the results will identify the constancy of a certain theme and how it compares to the rest. The qualitative portion, however, will dissect actual responses.

4.1. Codes

In order to identify consistent themes, the codes from each column were created by analyzing the responses, which produced a categorized list of the coding system that was divided into five categories: General Codes, Sub-codes, Positive or Negative, Needs to Become Involved and Pedagogical Goals. Each category displays the full code name as well as lateral columns with acronyms (if required). This report will contain a description of each coding category including a full list of the actual codes.

Table-1. Codes



The general codes graph demonstrates how certain themes are more prevalent throughout the responses than others. The numbers above each of the bars represent the number of instances that particular code was inputted out of a total of 216. Being mentioned 51 times, the faculty discussed Student Participation most prevalently followed by general Conceptions, at 37. The lowest three dealt with the faculty themselves and not the actual students: Teaching experience (2), Online Teaching Experience (5), Incentives (4).

4.2. General Codes

The General Codes are the main themes derived from the responses from survey participants. Twelve codes were devised consisting of recurring patterns. A list of each code will be discussed along with accompanying acronyms and explanations is listed below:

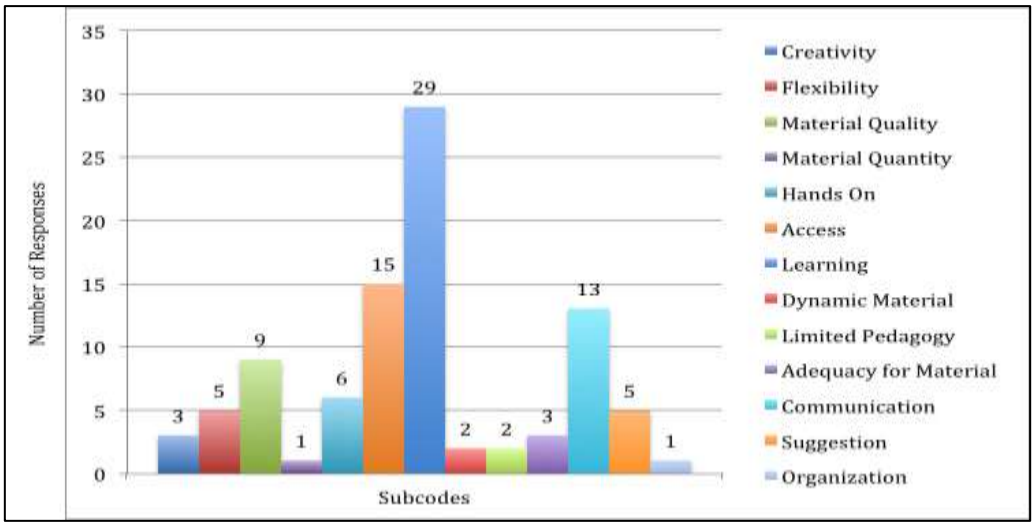
1. Conceptions [C]: Encompasses general and neutral pre-conceptions about online teaching.
2. Student Participation [SP]: Describes student course participation.
3. Student Teacher Interaction [STI]: Focuses on how faculty interacts with the students.
4. Technology Access [TA]: The availability and access to technology (computers, Internet, etc.) from students and faculty to engage in online teaching.
5. Student Accountability [SA]: Describe the relationship between online courses and how they may affect levels of student accountability.
6. Online Teaching Training [OTT]: Discuss the preparedness faculty have / need to engage in online teaching through training.
7. Online Teaching Experience (OTE]: The varying degrees of experience each faculty may have with online teaching and their reactions to them.
8. Online Teaching Hybridity [OTH]: Encompass how dynamic online courses can / should be by using differing teaching tools.
9. Time and Effort Involved [TEI]: The amount of time and effort involved in designing and running online courses.
10. Technology Support [TS]: The technology support the university offers in order to properly run online courses.
11. Incentives [I]: The incentives provided by the university to teach online.

4.3. Sub-Codes

The General Codes were further specified by Sub-codes. There are a total of 13 Sub-codes that describe ideas about the overall experience with online teaching. These themes focus on the course material, process, student and faculty experience for virtual learning. The Sub-codes are the following:

1. Creativity: How students can express creativity in a virtual class.
2. Flexibility: How online courses can be flexible to address all of the students' needs.
3. Material Quality: How the quality of the teaching material may be affected.
4. Material Quantity: How the quantity of the teaching material may be affected.
5. Hands On: How activities requiring a hands on approach may be addressed.
6. Access: How accessible these online courses can be for students and faculty.
7. Learning: How learning outcomes are affected by virtual teaching.
8. Dynamic Material: How material requiring different approaches may be expressed.
9. Communication: How communication amongst students and faculty would occur.
10. Suggestions: Possible suggestions faculty may have to improve online teaching.
11. Organization: How online courses should be organized.

Table-2. Sub-codes

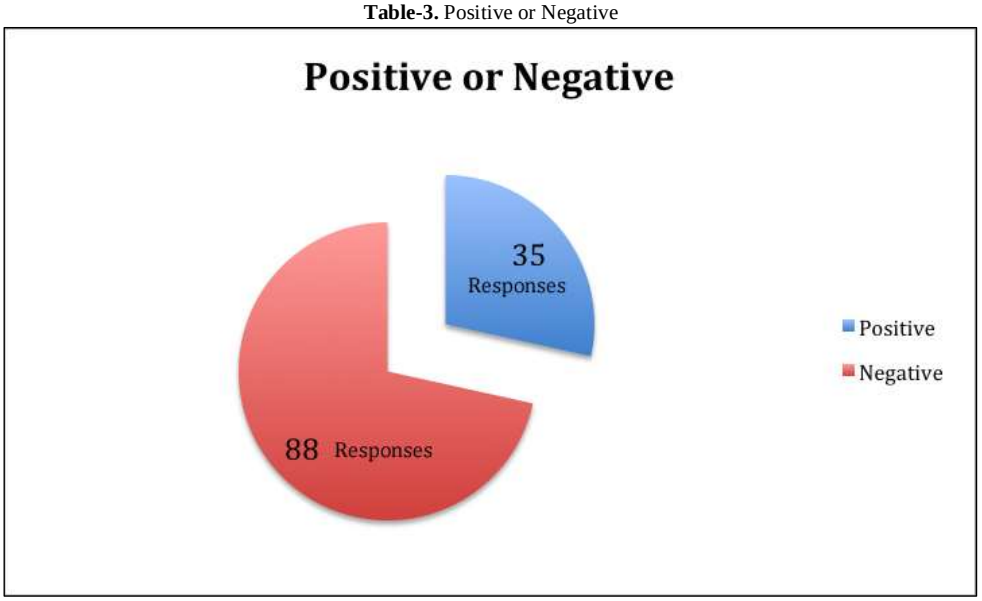


The Sub-codes chart demonstrates a similar trend of interest. A total of 94 Sub-codes were inputted. Learning ranked as the most discussed theme at a 29 followed by Access (15) to technology and overall Communication (13). The lowest mentions regard the actual construction of the class: Material Quantity (1) and Organization (1).

4.4. Positive or Negative

The positive or negative category does not contain a list of codes. This coding category simply assesses the already coded responses. This category de-neutralizes the prior General Codes and Sub-codes and interprets whether the response is negative or positive in regard to online teaching. A positive response would be displayed with a [+] sign and a negative response with a [-] sign.

Table-3. Positive or Negative



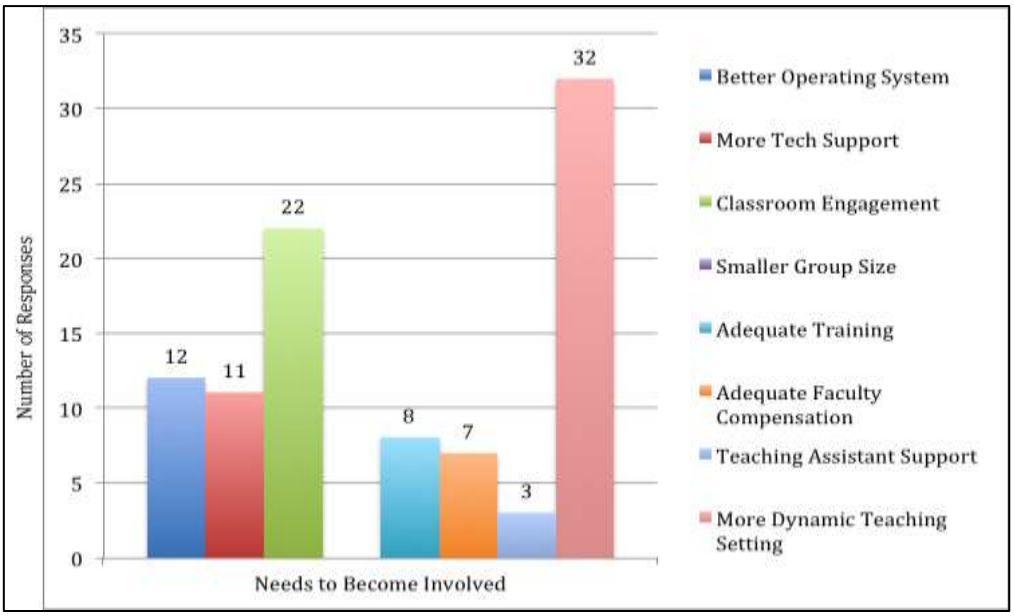
The chart above is a more straightforward breakdown. A total of 123 Positive and Negative instances were counted. Out of this total, an overwhelming majority of the responses (88) were coded as negative, while 35 were coded as positive.

4.5. Needs to Become Involved

The Needs to Become Involved category specifically address concerns / needs discussed by the faculty in order to improve online courses. These needs may be independent from the previous coding categories but can also be related. A total of eight reoccurring needs were identified as follows:

1. Better Operating System [BOS]: The university needs to provide a better operating system to improve the experience with online teaching.
2. More Tech Support [MTS]: More technical support needs to be provided to address technical issues.
3. Classroom Engagement [CE]: Adequate classroom engagement needs to result from online courses.
4. Smaller Group Size [SGS]: Online courses need to have smaller student enrollment to properly focus on the needs of all students.
5. Adequate Training [AT]: Faculty need to be properly trained in using virtual learning.
6. Adequate Faculty Compensation [AFC]: Faculty need to be properly compensated for their time and effort involved in running and preparing for online courses.
7. Teaching Assistant Support [TAS]: Teaching assistants need to be provided to aid faculty with workload.
8. More Dynamic Teaching Settings [MDTS]: To address all academic fields and various teaching strategies, online courses need to provide more dynamic teaching settings.

Table-4. Needs to Become Involved



The Needs to Become Involved graph totaled to 95 instances. Most of the faculty's responses hinted toward a greater need for a More Dynamic Teaching Setting in online courses at 32 instances. Classroom Engagement follows

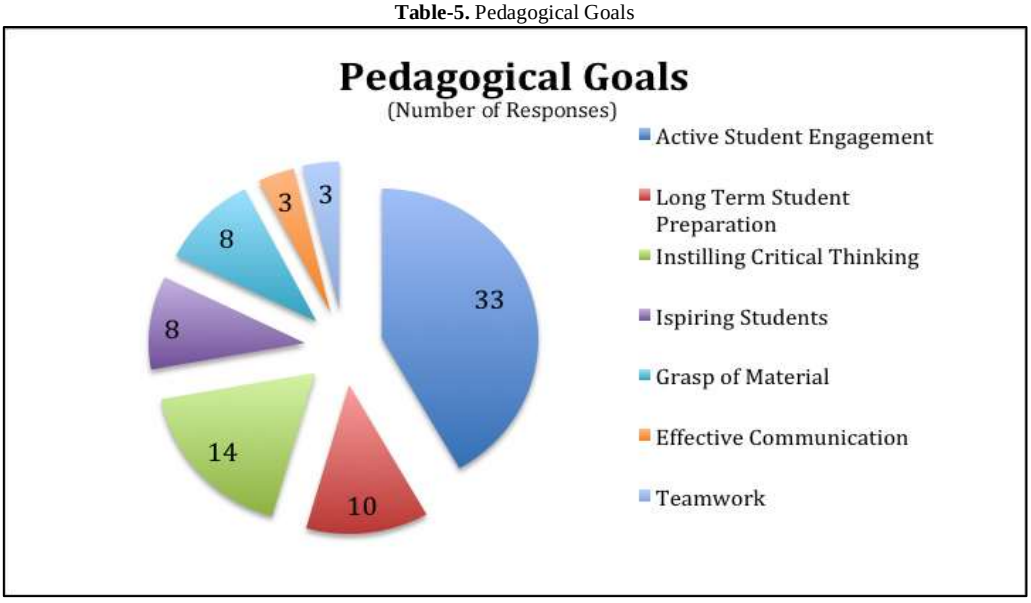
as another need with 22. And the size of the group is not important and thus Teaching Assistant Support is minimally necessary.

4.6. Pedagogical Goals

The final coding category involves the pedagogical goals of the faculty. Although these goals may be related to the topic of online education, they exist independently from the remainder of the responses. This section focuses mostly on one question from the interview: what are important pedagogical goals to you? However, this question acts as a transition point. The following question asks how online teaching can enhance pedagogical goals. Thus, the only question coded with the pedagogical goals is the former. By learning about the faculty's important goals, it is easier to understand what their teaching priorities are and how online tools can help in achieving them. The identified codes for the pedagogical goals are as follows:

1. Active Student Engagement [ASE]: The faculty wants to encourage a teaching environment where students are active participants.
2. Long Term Student Preparation [LTSP]: The faculty want to provide and prepare students with long term skills to better aid them in the job market.
3. Instilling Critical Thinking [ICT]: The faculty want students to understand the material in a more critical sense.
4. Inspiring Students [IS]: The faculty want to inspire students, through various teaching techniques, for enhanced learning.
5. Grasp of Material [GM]: The faculty want to create strategies that will help students grasp and understand the material more effectively.
6. Effective Communication [EC]: The faculty want to instill an environment where student to student and student to faculty communication is prominent.
7. Teamwork [TW]: The faculty want to see students working together in teams for enhanced learning experiences.

Table-5. Pedagogical Goals



This final chart on the Pedagogical Goals follows the trend. Seventy-nine goals instances were coded. From this total the majority pertains to Active Student Engagement at 33 mentions. The rest of the goals are in order as follows: Instilling Critical Thinking (14), Long Term Student Preparation (10), Inspiring Students (8), Grasp of Material (8), Effective Communication (3) and Teamwork (3).

5. Discussion

An initial analysis of this data demonstrates clear levels of varying interest in different areas regarding distance learning. This analysis is broken down into five sections to mirror the coding of the transcript: Codes, Sub-codes, Positive or Negative, Needs to Become Involved and Pedagogical Goals. A count of each of the five sections created the total value to compose the following charts. This total count is further divided by the individual count of each of the codes present in the Excel sheet.

The survey was sent out to 343 participants, of which 172 surveys were completed, which represents a return rate of 50%, an excellent result for any online survey. Of the surveys returned, an initial question was posed to the faculty who had not taught online, if they would consider teaching online. The results showed that 138 faculty members answered “Yes” or “Maybe”, which demonstrated a willingness to consider online teaching by 81% of the respondents.

The remaining 34 faculty members who answered “No” did overwhelming respond positively to a follow up question of whether they would teach a hybrid course (50% online), 62% said they would. When asked if had ever

been led through or participated in a tutorial for an online course, 83% said they had not been led through or participated in a tutorial for an online course.

As for individual reasons why faculty members had not taught online, of those who answered "No", 100% stated that they preferred the face-to-face interaction provided in a classroom setting and that they believe online courses take away from the learning experience. Of those who answered "Maybe", 90% (n=57) said they preferred the face-to-face interaction provided in a classroom setting and 71% (n=45) said the think online courses take away from the learning experience. Of those who answered "Yes", 77% (n=58) said they preferred the face-to-face interaction provided in a classroom setting and 44% (n=33) said online teaching is more time consuming than teaching a traditional classroom course. Interestingly, they had these overwhelming opinions about impact of online classes having never taught online or for the majority, had any training that might lead to teaching online.

For the most part, UTEP faculty members who had never taught online understand that online courses require a high degree of student autonomy and self-regulated learning, which research has shown to be a barrier for students in online courses in terms of their academic achievement as evidenced by the overall grade that is earned. In other words, students who demonstrate a mastery of complex concepts and can communicate that effectively in a written format achieve the highest grades. Many of the sample surveyed feel under prepared in terms of technology skills to adequately teach online and would benefit greatly from both technology and pedagogical mentors, who could help with issues of course construction and online classroom interactions.

Finally, faculty did identify factors, which would encourage them to teach online, which primarily centered on course release time, course development funds and adequate training with external technology support. Many wondered if teaching online is a more effective way to teach or if it is just a strategy to reduce costs, make more money, and provide convenience for the professor while negatively impacting the overall learning of the student.

The charts found in Tables 1, 2, 3, 4, 5 demonstrate a consistent pattern. The participants were overwhelmingly more interested in how online courses would affect the students primarily as opposed to the faculty themselves. From the Positive and Negative chart, it is clear that most of the pre-conceptions about online courses were negative. From the remainder of the data, the faculty demonstrates continuous concern over student participation and communication within the classroom. Professors' concern over student participation and communication are exhibited through some of the following direct quotations:

"Group discussions provide a variety of perspectives"

"Personal interaction, the immediacy and complexity of it, are crucial to develop and practice public speaking, intellectual debate, social skills, and simply be trained in critical thinking skills"

"Although more students may participate in online discussions, this skill is not as useful as the ability to state their points verbally in class"

"Building community; creating a collaborative learning environment; group discussions and presentations; student centered learning"

"Preparing students to interact effectively face to face, in written communication, and online"

Regardless of the faculty's focus on how online courses affect students, they also mention its effects on themselves. The tables demonstrate that although minimally, the survey respondents discuss incentives to teaching online, particularly through adequate compensation as well as the amount of time and effort that would be involved. The responses demonstrate the participants' skepticism regarding the lack of proper university compensation for teaching online. In addition, the majority of respondents believe that online courses take more time and effort than they are worth. These two main conceptions are exhibited through some of the following direct responses:

"Will there be incentives? In some universities, instructors of online courses receive a portion of the registration fees as incentive money. I see the investment in time as very significant: how will this be taken into account in the tenure and promotion process?"

"Yet, performance raises (or even cost of living increases) seem to be nonexistent here. Instead, financial rewards are reserved for those who fill out the most paperwork in the prettiest ways"

"What will the institution do to increase the weight of online teaching in promotion and tenure?"

"There is a great deal of hands on technical training involved"

"As I have tried using more technology in courses, it is often the case that they take more time and not less"

"Still concerned about the upfront prep time in changing format from classroom to online"

Faculty who reported advantages of online learning described maintaining teaching satisfaction as a requirement in order for distance learning to be fully adopted. Teaching satisfaction consisted of continuous learning, flexibility, convenience, and personal growth. Developing a personal relationship with students was an important factor that was emphasized. Many found distance learning a gateway to communication with students who were otherwise reluctant to speak up in a face-to-face setting, were unable to physically attend the university, and felt that this increased accessibility led to higher education opportunities for nontraditional students. Distance learning was described as enhancing creativity through the personal development of courses while keeping teaching innovative with technology as it was described as "the future". With an increased online class size, one faculty member reported the opportunity to be more productive with "robust and varied discussions" which implemented the use of critical thinking skills for both the faculty and students. Another faculty member stated, "Online classes require the ability to have critical thinking skills, study skills and self-motivation so that students can understand the complex data and interpretation that is involved".

The main benefit for students that encouraged faculty to consider teaching online was accommodating the needs of a variety of students. Distance learning not only presents an opportunity in higher education for nontraditional

students, but military and international students as well (Hepworth *et al.*, 2018). Many faculty members felt that online teaching enhances student accountability that increases class participation and allows students to develop not only their writing skills but their technology and analytical skills as well. One faculty member believed that all departments should provide online courses as alternatives to traditional classes, as doing so would create more courses, enhance convenience for students, increase overall student population in the university and eventually produce more college graduates.

Faculty stated that online teaching improved teacher communication skills, organization and course planning. Faculty members felt that potential publication and research opportunities existed in terms of new instructional methods for teaching online courses in their field. One participant believed that online teaching " would force me to write each of my lectures, on every book and concept, increasing the opportunity of publishing the methods as essays". Online teaching was reported to be "family friendly" for both students and faculty members who had less time to attend the university. Additionally, many found distance learning to be cost effective, adaptive to individual student needs and more productive with less deviation from class time. One faculty member felt that online teaching could be perfected with "evaluation and revision" and it was up to the university to get up to speed with the times. This faculty member stated "I believe in another decade we all will be wondering why millions of dollars were spent expanding class rooms when all fixed facilities will be needed for is technical instruction, practice, and evaluation. Alas, get on the train to the future or get off and watch it pass you by".

Faculty described limitations of online teaching that negatively affected teaching satisfaction. These include excessive time consumption and effort, unreliable technology, inadequate administrative support, low evaluation scores, lack of student motivation and commitment, limited personal relationships with students, and an absence of opportunity for personal development and growth. When speaking specifically about online teaching at UTEP a major deterrent was the use and unreliability of Blackboard. One faculty member described UTEP's distance learning as unorganized, archaic, and limiting in flexibility. Limitations such as copy rights, forced course collaboration and approval of ISS were also mentioned as deterrents. Such disadvantages decreased demonstration of teaching skills. Faculty members reported students as less enthusiastic, less committed and difficult to maintain motivation. A possible reason is that online courses are falsely believed to be easier and less time consuming. A lack of administrative support and recognition inhibited faculty from teaching more online classes with many reporting low evaluation scores after teaching online. Lastly, there was a reported increase in cheating among students and decreased number of mentor/student relationships. Many, if not most faculty members who were not enthusiastic about distance learning felt that they were not adequately trained on how to implement all the functions that Blackboard has to offer.

Impediments for online teaching that related to student needs were miscommunications, lack of motivation from students, inability to sharpen skills, failure to build successful relationships with students and loss of course quality. One faculty member commented that course schedules do not accommodate to the schedule of the students and that this consequently delays graduation time. This pertains to both online and traditional classes, and that there is a better need for data driven course offerings based on actual student degree needs and not historical schedules, in other words, to make the course offerings student needs centered and not faculty teaching centered.

Technology proved to be a problem for students as well. Apart from the usual unreliability of the LMS, many of the students, especially the nontraditional students, were not as technologically advanced as others. Not only did they fall behind in course work but were stressed by the experience. Faculty overwhelmingly suggested that requirements should be in place before students can take online courses, which could be demonstrated through online orientation materials, online and F2F workshops as well as other basic LMS training, such as topical video modules. In addition, faculty reported online teaching prevented the sharpening of skills such as communication and presentation skills, along with an inability to demonstrate critical thinking skills. It was emphasized by this surveyed group, that conducting class online prevents mentoring and research experience for the students. One faculty member summed up this opinion by stating "Distance learning simply does not replace human contact."

Certain limitations were salient when analyzing faculty responses. While examining the incentives and disincentives of online teaching, it is important to take into consideration faculty demographics. For this survey participant demographics were limited. Age, gender, academic rank, computer skill level, and the number of students in previous participating online classes were not taken into consideration. In a study conducted by Shea (2007) the listed factors played an import role in addressing faculty needs, motivators and demotivators for online teaching. In order to be able to fully analyze online teaching at UTEP, a comparative study with other universities who practice distance learning should be conducted. This survey focused on faculty who had no previous experience with online courses but did not include those who were inexperienced (Brown and Ramasamy, 2017). Creating a survey for inexperienced faculty members would perhaps provide a more representative view of the overall impacts for students learning styles and academic achievement within online courses (Cheng and Chau, 2016).

6. Conclusion

Institutions of higher education must consider the consequences and not just the benefits that online teaching has to offer. Although distance learning does in fact provide non-traditional students the opportunity of higher education the integrity of university must not be lost, in other words, universities teaching online must not trade quantity for quality (deNoyelles *et al.*, 2017). Additionally, the growth in student population and academic research has prompted a revolution within the academic infrastructure of higher education. Online education caters to a larger and more varied student body (successfully including the non-traditional student), is often more convenient for students as well as being more economically prudent to the university (Robinson, 2017). The results portion of the report

indicate that faculty are concerned mostly with student success attributed to their participation in the classroom and least concerned with the actual online course mechanics and its effects on the faculty.

Appendix 1: Thematic Clustering

The following list consists of themes that were created after an analysis of survey data and results using a cluster analysis within a qualitative framework. They were then divided into sub categories that consisted of overall online teaching experience, teacher's needs, student needs, concerns, and benefits.

1) Teaching Experience (TE)
2) Teaching online experience (TOLE)
3) Voluntary (V)
4) Requirement (R)
5) Reasons for Online Teaching (BFT)
6) Teaching Satisfaction (TS)
7) Benefits of Online Teaching (BFT)
8) Concerns (CN)
9) Time Consumption and Effort (TCE)
10) Technical Support (Tech S)
11) Efficient Training (EF)
12) Evaluation Scores (ES)
13) Appreciation (A)
14) Teacher's Needs (TN)
15) Student Needs (SN)
16) Dissatisfaction with Online Teaching (DIS)
17) Disincentive (DISI)

Appendix 2: Thematic Clustering Part Two

After creating themes, the survey questions were then individually coded into appropriate categories.

Questions	**Categories :Responses /Relevance**
How long have you been teaching courses online?	Teaching experience(TE),Teaching Satisfaction (TS)
How many online courses have you taught?	Teaching experience(TE), Teaching Satisfaction (TS), Teaching Online Experience (TOLE)
Reasons for online teaching?	Voluntary(V), Requirement (R), Teaching Satisfaction (TS), Benefits (BNF), Teacher's needs (TN), Student Needs (SN)
How satisfied are you with teaching online?	Voluntary (V), Requirement (R), Teaching Satisfaction (TS), Benefits (BNF), Concerns of Online Teaching (CN), Time Consumption/Effort (TC), Technical Support (TechS), Efficient Training (EF), Teacher's needs (TN), Student Needs (SN), Dissatisfaction (DIS), Disincentive (DISI)
Benefits of teaching online?	Teaching experience (TE), Voluntary (V), Teaching Satisfaction (TS), Teaching Needs (TN), Student Needs (SN), Evaluation Scores (EVS), Appreciation (A)
What concerns do you have with teaching online?	Teaching Experience (TE), Requirement (R), Teaching Satisfaction (TS), Benefits of Online Teaching (BFT), Time Consumption / Effort (TC), Technical Support (TechS), Efficient Training (EF), Evaluation Scores (EVS), Appreciation (A), Teacher's needs (TN), Student Needs (SN), Dissatisfaction (DIS), Disincentives (DISI), Concerns (CN)
How much more effort does it take to plan an online course than its traditional counterpart?	Teaching Online Experience (TOLE), Concerns (CN), Time Consumption and Effort (TCE), Technical Support (TechS), Efficient Training (EF), Teacher's needs (TN), Dissatisfaction (DIS), Disincentives (DISI)
How much more effort does it take to deliver online courses vs. its traditional counterpart in order to achieve the same quality?	Teaching Online Experience (TOLE), Concerns (CN), Time Consumption and Effort (TCE), Technical Support (TechS), Efficient Training (EF), Teacher's needs (TN), Dissatisfaction (DIS), Disincentives (DISI), Student Needs (SN), Evaluation Scores (EVS), Appreciation (A),
I feel I have enough technical support when creating a new online course	Concerns (CN), Technical Support(Tech S), Time Consumption and Effort (TCE), Efficient Training (EF), Dissatisfaction (DIS), Disincentive (DISI)
I feel I have enough technical support when revamping an existing online course.	Concerns (CN), Technical Support(Tech S), Time Consumption and Effort (TCE), Efficient Training (EF)

Developing an archiving system for online courses previously taught would be helpful	Teaching Online Experience (TOLE), Teaching Satisfaction (TS), Benefits of Online Teaching (BFT), Time Consumption and Effort (TCE), Technical Support (TechS), Efficient Training (EF), Teacher's needs (TN)
I prefer to build my own entire online course as opposed to turning over material over to an ISS course designer.	Teaching Online Experience (TOLE), Teaching Satisfaction (TS), Benefits of Online Teaching (BFT), Time Consumption and Effort (TCE), Technical Support (Tech S), Efficient Training (EF), Evaluation Scores (ES), Appreciation (A), Teacher's needs (TN), Student Needs (SN), Dissatisfaction with Online Teaching (DIS)
The Blackboard activities I do are unnecessarily time consuming	Teaching online experience (TOLE), Concerns (CN), Time Consumption and Effort (TCE), Technical Support (Tech S), Efficient Training (EF), Teacher's needs (TN),Student Needs (SN), Dissatisfaction with Online Teaching (DIS), Disincentive (DISI)
I feel that my course evaluation scores for courses taught online are comparable to my course evaluation score for face to face courses.	Teaching Experience (TE), Teaching Satisfaction (TS), Benefits of Online Teaching (BFT), Concerns (CN), Time Consumption and Effort (TCE), Evaluation Scores (ES), Appreciation (A), Teacher's needs (TN), Dissatisfaction with Online Teaching (DIS), Disincentive (DISI)
Department chairs and committees are aware of the faculty time commitment necessary for student assessment activities (tests, quizzes, exercises, papers, etc.) in online courses.	Teaching online experience (TOLE), Evaluation Scores (ES), Concerns (CN), Time Consumption and Effort (TCE), Appreciation (A), Teaching Satisfaction (TS), Teacher's needs (TN), Dissatisfaction with Online Teaching (DIS), Disincentive (DISI)
My evaluation committee or chair is aware of the range of demands of online teaching (ex: technology breakdowns, timely response to students)	Teaching online experience (TOLE), Evaluation Scores (ES), Concerns (CN), Time Consumption and Effort (TCE), Appreciation (A), Teaching Satisfaction (TS), Teacher's needs (TN), Dissatisfaction with Online Teaching (DIS), Disincentive (DISI)
I think training for online courses considers the specific pedagogical needs and possibilities as well as providing technical knowledge to faculty.	Teaching Experience (TE), Teaching online experience (TOLE), Teaching Satisfaction (TS), Benefits of Online Teaching (BFT),Concerns (CN), Technical Support (Tech S), Efficient Training (EF), Teacher's needs (TN)
Online teaching suits my teaching philosophy.	Teaching Experience (TE), Teaching online experience (TOLE), Teaching Satisfaction (TS), Benefits of Online Teaching (BFT),Concerns (CN), Technical Support (Tech S), Efficient Training (EF), Teacher's needs (TN), Dissatisfaction with Online Teaching (DIS), Disincentive (DISI)
Students would perform better if they attend training prior to taking online courses for the first time.	Teaching online experience (TOLE), Teaching Satisfaction (TS), Time Consumption and Effort (TCE), Technical Support (Tech S), Efficient Training (EF), Teacher's needs (TN), Student Needs (SN)
What type of training should students receive before enrolling in online courses?	Time Consumption and Effort (TCE), Technical Support (Tech S), Efficient Training (EF), Teacher's needs (TN), Student Needs (SN)
I think processes should be in place for faculty to obtain feedback during the online course to allow faculty to make course adjustments.	Teaching online experience (TOLE), Teaching Satisfaction (TS), Time Consumption and Effort (TCE), Teacher's needs (TN), Student Needs (SN), Teaching Satisfaction (TS)
I think students in an online course are more engaged than students in face to face course.	Benefits of Online Teaching (BFT), Teacher's needs (TN), Student Needs (SN), Teaching Satisfaction (TS),
What online course tools are you aware of that you are not sufficiently trained or prepared to utilize.	Teaching online experience (TOLE), Concerns (CN), Technical Support (Tech S), Efficient Training (EF), Teacher's needs (TN),Student Needs (SN) Dissatisfaction with Online Teaching (DIS), Disincentive (DISI)
How interested would you be in expanding enrollment in your capped online class If support (TA) was available?	Teaching online experience (TOLE), Teaching Satisfaction (TS), Benefits of Online Teaching (BFT), Concerns (CN), Time Consumption and Effort (TCE),Technical Support (Tech S), Efficient Training (EF), Teacher's needs (TN), Student Needs (SN), Evaluation Scores (ES)

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