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# Does Academic Level Affect Student Perceptions of Threaded Discussions in Online Learning?

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#### **Abstract**

This research is a continuation of a study that examined students' attitudes and perceptions of the use of threaded discussions in online courses. The focus of this particular study was on the present academic level of the student and their perceptions of the various aspects of threaded discussions in online learning. University students from the freshman level through the doctorate level were included in the data examination. Results indicate that students' at all academic levels generally enjoy engaging in the required threaded discussions but are somewhat neutral about their effectiveness and usefulness. In addition, when an option between a written assignment or a threaded discussion, all academic levels showed a clear preference for threaded discussions. When confronted with the option of taking a course in either the traditional, face-to-face format or online, a definite preference was shown for the traditional face-to-face course format. However, there was strong evidence that the present academic level has an effect of the students' perceptions of online learning in general and specifically their perceptions of threaded discussions.

**Keywords:** Academic Level, Online Learning, Asynchronous, Threaded Discussions, Traditional Coursework, University Students.

Reference to this paper should be made as follows:

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#### INTRODUCTION

The demand of online degree programs has increased in popularity in the United States. In fact, within the United States, 6.9 million students enrolled in at least one online course in fall 2012—an increase of more than 500,000 students compared to 2010. At least 32% of all college and university students have taken an online course (Bird, 2014). A 2011 survey by the Babson group (2012) indicates that academic leaders believe that the level of student satisfaction is equivalent for online and face-to-face courses. At this point over 65% of higher education institutions now say that online learning is a critical part of their long-term strategy.

This study examines the similarities and differences in the attitudes and perceptions of university students at various academic levels (freshmen-doctoral) with regard to threaded discussions in fully online courses. A number of online course teaching faculty find that many students who may be very quiet in a classroom may be very participatory online if given the time to thoughtfully respond to questions. In many Learning Management Systems (LMS), this is achieved through asynchronous applications like threaded discussions. Threaded discussions may be used across content areas to promote critical thinking and reflection outside of the typical 40 to 60 minute domain constraints of the regular classroom. Threaded discussions can provide virtual learning connections that transcend class hours and provide a dynamic, dialogic learning environment where students reflect, collaborate and discuss real-world issues (Rizopoulos & Mccarthy, 2009).

#### LITERATURE REVIEW

Although there is a considerable amount of research on online learning and threaded discussions, very little was found on academic levels and threaded discussions. However, some interesting and related studies were found that added to the scope and focus of this study. It has been well established from the early days of online learning that students who actively participate in the learning process learn more than those who do not. Tinto (1997) indicated that learning can occur both inside and outside the classroom—even if it is an online classroom. Kassop (2003) suggested that student learning in threaded discussion equals or even exceeds that of traditional, face-to-face courses. Additionally, this study indicated that highly reflective threaded discussion can contribute to the high quality of discourse which can often surpass classroom discussions.

The focus of this study was three pronged. The researchers wanted to examine if university students, at the various academic levels, enjoyed threaded discussions and felt positive about their contributions to learning in the fully online format. The second area of focus was the amount of time devoted to completing and posting their responses to threaded discussion related assignments. The third area of interest was the students' willingness to take online courses that had a high level of threaded discussion related coursework. In addition, given the option, would they prefer the same course in the online format or the traditional face-to-face format?

# Do students at the various academic levels enjoy and learn from threaded discussion in an online course?

In a focus group study conducted by Burton & Goldsmith (2002) most students indicated that challenges and restrictions in personal schedules made online courses appealing, including the convenience of not having to be on campus during the week, flexibility with personal commitments, and ability to take courses around work schedules. A study by Vella (1994) states, "The dialogue of learning is between two adult subjects: teacher and student. This dialogue does not change in online classrooms. If anything, dialogue, operationalized as active participation in the virtual classroom, becomes more important."

A number of studies report that asynchronous threaded discussions allow the students the opportunity to ponder, investigate and question prior to responding. In addition, the online format removes the peer-pressure and self-consciousness that can often hinder a regular classroom discussion. The sometimes, faceless environment of threaded discussions encourages active inclusion and engagement of all students (Murchu & Muirhead, 2002). A study that looked at student satisfaction (Cole, Shelley & Swartz, 2007) found that overall, students rated their online instruction as moderately satisfactory, with hybrid or partially online courses rated as somewhat more satisfactory than fully online courses. "Convenience" was the most cited reason for satisfaction.

# How much time do students at the various academic levels spend on the preparation and completion on online threaded discussion assignments?

A study by Arbaugh (2004) found that the average student will spend approximately one hour each week reading the text of the discussion. This assumed that it takes fewer than two hours to compose initial messages and responses to the discussion prompt. The researchers concluded that the time commitment for participatory activity is similar to that of traditional, face-to-face courses. A number of students indicated that they get better at working in the online environment the more courses they take, thus reducing time on tasks. In addition the Arbaugh study asked students throughout a four year online M.B.A. program to determine whether or not their perception of online courses changed as they became more familiar with the delivery medium. He found that student perception of online learning became more positive as students took subsequent courses, and that the most notable change came between the first and second course. According to Brown and Green (2009), "a typical, graduate-level, online, asynchronous discussion requires about one hour a week of reading time, and the time commitment for participatory activity is similar to that of traditional, face-to-face courses, given that it takes under two hours to compose initial messages and responses to the discussions prompt." Brown & Green (2009) also reported that the average student will spend approximately one hour each week reading the text of the discussion. This assumes that it takes less than two hours to compose initial messages and responses to the discussion prompt, the time commitment for participatory activity is similar to that of traditional, face-to-face courses.

A research project by Meyer (2003) examined students' preferences for face-to-face learning versus threaded discussions. The students were asked to compare face to face and threaded online discussions. She analyzed responses for higher-order thinking and students perceptions. Students expressed that online discussions took more time, provided the opportunity for more thoughtful and well supported responses, and highlighted writing skills. An overwhelming majority of students, while averse to the additional time commitment, reported the additional 'time to reflect' as an advantage to threaded discussions. Many students preferred the opportunities provided by an online discussion to fully participate as opposed to traditional face-to-face discussions which may alienate participating members for a variety of reasons (Meyer, 2003). Online discussions do not come without opposition; for example, one student in the Meyer (2003) study specifically stated that he or she missed the "facial and hand gestures" that are associated with face-to-face discussions.

In a study by Song, Singleton, Hill and Koh (2004), 76 graduate students were examined to determine the benefits and challenges of online courses. This research included their perceptions of time management and online course preparation. They found that course design, learner motivation, time management, and familiarity with technology lead to success in an online course. However, technical problems, time constraints, lack of community and difficulty understanding course objective were barriers to learning online.

# Do university students at the various academic levels have a preference for online course versus traditional, face-to-face courses?

There is some research that suggests that courses delivered online produce at least comparable learning outcomes when compared to traditional classroom-based courses when the instructional methods and requirements are similar (Sitzmann, Kraiger, Stewart & Wisher, 2006).

The focus study by Burton and Goldsmith (2002) found students indicating that they thought online courses would be more challenging than on-ground courses. However, the students in the study were careful to emphasize that the greater challenge should not come from course content; online courses should not be conceptually harder than on-ground courses.

Those students who indicated that online courses are better believed that interaction between student and faculty and among students were better than on-ground. The students in the focus groups who perceived on-ground courses to be better believed that the immediacy of discussion between instructor and student and student to student was more constructive than the delayed discussion online (Burton & Goldsmith, 2002).

When asked for a preference between taking a fully online course and taking the same course in the face-to-face format, most students agreed that taking online courses was beneficial and would consider taking another one. The most common reason for taking online courses was flexibility in scheduling and their responses supported this perceived benefit. Although some students did not believe that online courses was the best choice for their educational needs, but because of the flexibility afforded by online courses, these students will continue their education online (Burton & Goldsmith, 2002). A study by Powell (2007) looked at two different delivery formats of the same graduate course: a traditional classroom setting and an online course. The selected courses contained a mix of synchronous and asynchronous activities. The findings indicated the satisfaction levels among students for both course formats were similar, with slight differences noted in instructor preparation and usefulness of assignments. Powell indicated that the instructor and not the delivery format was the determining variable. Powell advocates an emphasis on assisting online instructors to adapt to new technologies to stay relevant in the distance learning setting.

A combined study (Shelley, Swartz & Cole, 2008) compared students' preference for online versus traditional curse formats. These two studies compared students enrolled in both online and classroom versions of the same business law course, BLAW 1050. In both studies the same professor taught the same course, using the same textbook, the same syllabus and using the same assessments. The first study found no significant difference between the two formats with regard to student satisfaction and student learning. The second study did find statistically significant differences in two elements of student satisfaction: 1) with the instructor and, 2) with the course structure.

#### METHODOLOGY AND SAMPLE

The original sample for this research consisted of 403 from four selected universities in the state of Pennsylvania. The participants responded to a 23 question online survey developed using Question-Pro. Two of these universities were state-supported schools, one with an enrollment of approximately 7000 students and the other with approximately 15,000 students. The third was a private institution with an enrollment of 6,200 students. The survey was administered to undergraduate classes as well as selected graduate courses and one doctoral class. The completed surveys were compiled and filtered to examine the responses students at various academic levels separately. Only students who had taken one or more fully online courses would be considered for the purpose of this study. After the filtering process was completed and the number of online courses taken had been established, the remaining sample was established; freshman (N=72), sophomore (N=57), junior (N=59), senior (N=69), graduate (N=128) and doctoral (N=11).

This study focused on seven major Research Questions (RQ):

**RQ1:** Is there a difference in the students' academic level and how they feel about threaded discussions adding to or enhancing their learning of the subject matter in fully online courses?

**RQ**<sub>2</sub>: Is there a difference between students level of enjoyment with the use of threaded discussions in fully online courses at the various academic levels?

**RQ3:** Is there a difference between the academic levels when comparing students' perception of the usefulness and importance of threaded discussions in a fully online course?

**RQ4:** Is there a difference in the amount of time (in minutes) that students spend on the preparation and completion of threaded discussion related assignments in fully online courses based on academic levels?

**RQ5:** Is there a difference between students of various academic levels when given a choice between written assignments or threaded discussion related assignments in a fully online course?

**RQ6:** Is there a difference between the students at various academic levels and their willingness to schedule a fully online course when the instructor is known to use a relatively high percentage of threaded discussion assignments?

**RQ**<sub>7</sub>: Is there a difference between students at various academic levels when given the option of taking the same course in a fully online the traditional face-to-face format?

#### **RESULTS AND ANALYSIS**

#### **Demographics**

This study collected data from all university academic levels; freshmen through doctoral students. One preset condition for inclusion in the data was that the student had completed at least one fully online course. This resulted in a total of 396 participants. The largest group in the sample was the graduate students who accounted for 120 survey participants. The freshmen through seniors were all somewhat close in numbers with a range of sophomore = 57, freshmen = 72. The availability of doctoral students in this study (N=11) was limited by the small number of existing university programs and overall student numbers. In most cases, for the purpose of this study, the small numbers of doctoral responses were not considered in drawing conclusions or predicting trends. All of the quantitative data and analysis in this study is displayed in Tables.

When the percentage of online courses taken was examined, the participants were asked to pick from five possibilities; 1 course, 1-3 courses, 4-7 courses, 8-10 courses and more than 10 (10+) courses taken. Here the undergraduates, freshmen through seniors were clustered within the 1-7 options. Only 11% of the sophomores and 2% of the seniors indicated they had taken 8-10 online courses. The graduate students indicated more online courses taken with 33% falling into the 1-10+ range. With the exception of the freshmen group, the majority of all participants have more than one fully online course (see Table 1).

#### **RESEARCH QUESTIONS**

 $RQ_1$ : Is there a difference in the students' academic level and how they feel about threaded discussions adding to or enhancing their learning of the subject matter in fully online courses?

The first question examined by the researchers asked the participants, "Based on your prior coursework, do threaded discussions add to or enhance your learning of the subject material in a fully online course?" The

results were fairly consistent at all academic levels. Sixty two percent of the freshmen indicated that the threaded discussions were somewhat helpful or very useful in adding to, or enhancing learning of the subject matter in a fully online course. Of the remaining academic levels, the sophomore students reported 73% followed by the juniors with 55%, the seniors with 63% and the graduate students with 75%. There was a stronger indication by the seniors (12%) and graduate students (15%) that they felt the threaded discussions added very little to the enhancement of subject matter. An interesting result was the number of freshmen (23%) that indicated they had no opinion on the question. A possible explanation is the limited exposure to fully online coursework experienced by the freshmen early in their academic programs (see Table 2).

Table 1: Academic Level and Percentage of online courses taken (1-10)

Academic Level	1	1-3	4-7	8-10	10+
Freshmen (N=72)	56%	23%	19%	0	0
Sophomore (N=57)	39%	38%	13%	3%	8%
Junior (N=59)	39%	52%	9%	0	0
Senior (N=69)	23%	56%	19%	2%	0
Graduate (N=128)	4%	29%	34%	16%	17%
Doctoral (N=11)	64%	10%	9%	9%	8%

Table 2: Do Threaded Discussions add to or enhance learning?

Academic Level	Very Little	Some,they help a little	No opinion	Somewhat belpful	Very useful.
Freshmen (N=72)	0	15%	23%	31%	31%
Sophomore (N=57)	9%	18%	0	27%	46%
Junior (N=59)	5%	35%	5%	30%	25%
Senior (N=69)	12%	23%	2%	43%	20%
Graduate (N=128)	15%	10%	0	55%	20%
Doctoral (N=11)	0	67%	0	33%	0

 $RQ_2$ : Is there a difference between students level of enjoyment with the use of threaded discussions in fully online courses at the various academic levels?

The next survey question examined the participants' level of enjoyment when threaded discussions were included in a fully online course at the various academic levels. This question produced some interesting but, somewhat inconclusive results. The various academic levels were basically scattered in their responses with no clear preferences evident. The only evident trend was in the "Very Little\Somewhat" options. Here, approximately half of the freshmen (57%), juniors (50%), seniors (50%) and graduate students (50%) indicated that they only find threaded discussions very little or somewhat enjoyable. The sophomore group results differed from the others and indicated that 70% of them feel that the threaded discussions are usually or always enjoyable components of their online courses. However, all groups expressed a somewhat low level of enjoyment (Very Little) with a range of 7% of the freshmen to 30% of the sophomores (see Table 3).

Table 3: Do you personally enjoy Threaded Discussions in your online courses?

Academic Level	Very Little	Somewhat, at times	No opinion	To Some degree, usually enjoy	Always enjoy them.
Freshmen (N=72)	7%	50%	0	14%	29%
Sophomore (N=57)	30%	0	0	20%	50%
Junior (N=59)	15%	35%	5%	30%	15%
Senior (N=69)	21%	23%	12%	29%	15%
Graduate (N=128)	17%	33%	4%	28%	18%
Doctoral (N=11)	0	100%	0	0	0

 $RQ_3$ : Is there a difference between the academic levels when comparing students' perception of the usefulness and importance of threaded discussions in a fully online course?

The next portion of the survey examined the student's perception of the importance of threaded discussions added to the quality of the online course at the various academic levels. All five academic levels indicated that they believed that threaded discussions could be an important and\or critical component of a fully online course. When these two options (Important Component and Critical Learning Activity) are grouped together; 64% of the freshmen, 72% of the sophomores, 55% of the juniors, 54% of the seniors and 57% of the graduate students indicated they believed the threaded discussions were important or critical learning activities. It is important to note that some of the seniors (14%) and graduate students (16%) actually felt that threaded discussions were a waste of time! (see Table 4).

Table 4: How do you find Threaded Discussions in your online courses?

Academic Level	A waste of time	Somewhat Useful	No opinion	Usually an important component	A critical learning activity
Freshmen (N=72)	0	22%	14%	57%	7%
Sophomore (N=57)	10%	18%	0	36%	36%
Junior (N=59)	10%	25%	10%	40%	15%
Senior (N=69)	14%	26%	6%	34%	20%
Graduate (N=128)	16%	26%	1%	41%	16%
Doctoral (N=11)	0	100%	0	0	0

**RQ4:** Is there a difference in the amount of time (in minutes) that students spend on the preparation and completion of threaded discussion related assignments in fully online courses based on academic levels?

When the participants were questioned as to the amount of time they must commit to preparing and completing threaded discussion assignments, the comparison between the academic levels was very close. The obvious trend in these responses was the increased amount of time spent on preparation and completion on threaded discussion assignments by the upperclassmen, juniors through graduate students. The juniors reported that 35% of them spent between 46-61+ minutes on these assignments. The seniors reported a slightly higher percentage (37%) followed by the graduate students who indicated that 46% of them spent from 46-61+ minutes working on threaded discussion assignments. The gradual increase in preparation and completion time might be explained by the increasing complexity of the assignments as the coursework becomes more challenging at the upper academic levels. Senior and graduate level students are frequently expected to make more detailed and extensive responses to course threaded discussions. In addition, upper level online courses will often expect a higher level of student-to-student interaction in this asynchronous environment (see Table #5).

**RQ**5: Is there a difference between students of various academic levels when given a choice between written assignments or threaded discussion related assignments in a fully online course?

The next area to be examined in this study was to see if there was a difference between students at the various academic levels when given a choice between a written course assignment and a threaded discussion assignment. The only clear preference was the sophomore group with 73% indicating they favored the threaded discussion assignment. The remaining academic groups were about evenly dispersed between three options; 1) They are about the same (20%-30% range), 2) I prefer the written assignment (29%-44% range) and, 3) I prefer the threaded discussion assignment (30%-43%). If the doctoral students' responses are included, four of the six academic groups (freshmen, sophomore, senior, doctoral) show a clear preference for the threaded discussion assignment over the written assignment (see Table 6).

Table 5: How much time do you spend preparing and completing.

Threaded Discussion assignments?

Academic Level	0-15 Minutes	16-30 Minutes	31-45 Minutes	46-60 Minutes	61+ Minutes
Freshmen (N=72)	8%	38%	46%	0	8%
Sophomore (N=57)	27%	46%	9%	9%	9%
Junior (N=59)	10%	25%	30%	20%	15%
Senior (N=69)	17%	23%	20%	26%	11%
Graduate (N=128)	2%	17%	35%	22%	24%
Doctoral (N=11)	33%	33%	34%	0	0

Table 6: Do you prefer a Written assignment or a Threaded Discussion?

Academic Level	I don't Really like either	They are about the same	No opinion.	Prefer the Written assignment	Prefer the Threaded Discussion assignment
Freshmen (N=72)	0	28%	0	29%	43%
Sophomore (N=57)	9%	0	0	18%	73%
Junior (N=59)	5%	30%	0	35%	30%
Senior (N=69)	3%	27%	0	29%	41%
Graduate (N=128)	0	20%	0	44%	36%
Doctoral (N=11)	0	0	0	33%	67%

 $RQ_6$ : Is there a difference between the students at various academic levels and their willingness to schedule a fully online course when the instructor is known to use a relatively high percentage of threaded discussion assignments?

One of the final areas of comparison between various academic levels was in regard to their willingness, or reluctance, to take an online professor's course if they knew that a high percentage (25-40%) of the course activity and assessment would be based on threaded discussions. Here again the sophomore respondents broke from the other academic levels with 73% of them indicating they would actually want this professor's course. The remaining academic levels all indicated that about 20% of them would actually want to schedule

this type of course. However, the clear majority of these levels (excluding the sophomore respondents), indicated that they would schedule this professor's course because of either scheduling or it really makes little difference; with 72% of the freshmen, 70% of the juniors, 66% of the seniors and 67% of the graduate students selecting these options. Only a small number of respondents (<7%) indicated they would never schedule this course (see Table 7).

Table 7: Would you schedule a fully online course if the instructor had a high

percentage of threaded discussion course requirements (25-40%)?

Academic Level	Never	I might, Because of scheduling	No opinion	Probably, it makes little difference	I would want This course
Freshmen (N=72)	0	36%	7%	36%	21%
Sophomore (N=57)	0	27%	0	0	73%
Junior (N=59)	5%	30%	5%	40%	20%
Senior (N=69)	3%	26%	11%	40%	20%
Graduate (N=128)	7%	27%	6%	40%	20%
Doctoral (N=11)	0	67%	0	33%	0

 $RQ_7$ : Is there a difference between students at various academic levels when given the option of taking the same course in a fully online the traditional face-to-face format?

The final question for all academic levels examined was the students' preference for scheduling either an online course or the same course in the traditional face-to-face format. The sophomore group again differed from all of the other academic levels with a higher (46%) indicating that they prefer the fully online course over the face-to-face course (27%). The remaining academic levels gave strong preference to selecting the face-to-face course offering (range 52%-63%). Overall, less that one-fourth of the participants indicated that they would be happy with either course format. If the 11 doctoral student responses are considered, it is almost an even distribution with 33% indicating the face-to-face option, 33% indicating that either is fine and 34% indicating that they would prefer the fully online option. With the exception of the sophomore group, there is a clear indication that most students would prefer the face-to-face course option (see Table 8).

Table 8: Given the option taking of a traditional, face-to-face course or a fully online course, which would you prefer?

Academic Level	Face-to- Face	Either Is fine	No opinion	Fully online
Freshmen (N=72)	54%	8%	0	38%
Sophomore (N=57)	27%	27%	0	46%
Junior (N=59)	63%	26%	0	11%
Senior (N=69)	59%	15%	2%	24%
Graduate (N=128)	52%	19%	0	29%
Doctoral (N=11)	33%	33%	0	34%

#### SUMMARY AND CONCLUSIONS

In summary, there are some obvious differences in how students at various academic levels view threaded discussions in online learning. This study did not attempt to examine why these differences exist; rather based on a combined 50+ years of university-level teaching, the researchers offer some possible reasons, speculations and observations.

After the existing data was filtered to examine each specified academic level, the total number of freshmen through seniors was fairly consistent with a range of 57-72 participants. The graduate students comprised the largest group of participants with 128 students responding to the survey. Only 11 of the doctoral students responded to the survey.

The first group of research questions (1-3) examined the students' perceptions about threaded discussions adding to or enhancing the learning experience and the usefulness of threaded discussions in general. In addition, the overall level of student enjoyment when working with threaded discussions was discussed. The majority of students at all academic levels indicated that they felt the threaded discussions were either somewhat helpful or very helpful by adding to and/or enhancing learning. However, there were some strong indications from the seniors (12%) and graduate students (15%) that threaded discussion add very little to the enhancement of the course content and subject matter. Perhaps after four to five years of taking online courses, the students at the higher academic levels may have experienced overuse and/or overexposure to the format and processes involved with threaded discussions?

When the participants were then asked if they found threaded discussions to be useful and important to the content and goals of the online course, all five academic levels (freshmen-doctoral) reported that they believed threaded discussions were an important or critical component of an effective online course. However, as reported previously in the area of enhancement, a number of upperclassmen reported that threaded discussions are a waste of time (seniors=14%, graduate students=16%). When students were questioned about their level of enjoyment when working with threaded discussions, none of the academic levels indicated any clear preference or option. There was, however, a definite pattern of selecting the two lower options; very little or only somewhat enjoyable.

When the students were asked about the amount of time devoted to the preparation and completion of threaded discussion assignments, the trend indicated increased time devoted by the upperclassmen. Twenty-

four percent of the graduate students reported that they spend more than 61 minutes on a threaded discussion assignment.

The third phase of the study looked at students' perceptions of threaded discussion versus written assignments along with their preferences for online verses traditional, face-to-face courses. The only clear preference for a threaded discussion assignment over a written assignment was reported by the sophomore group. This group had 73% indicating that they favored the threaded discussion. When asked if they would take a professor's course if they knew he\she had a high percentage (25-40%) of the class activity devoted to threaded discussions, most felt that, either because of scheduling or no strong preference, they would schedule this course. However, the sophomore group again gave a strong indication (73%) that they would actually prefer this type of course.

The final question in this study asked participants if, given a choice, of taking the same course in the traditional, face-to-face format or taking it in a fully online format what would the select? With the exception of the sophomore group, all academic levels indicated a preference for the traditional, face-to-face course. A majority of the sophomore group (46%) indicated a preference for the fully online course format.

The results of this study indicate clear differences in opinions and choices between students at the various academic levels in regards to threaded discussions in online courses. Perhaps much of this can be attributed to life styles and life situations. In general, the freshmen and sophomore students have had fewer online courses and many\all of them are in the lower level "core" area of their academic program(s). Upper level students, including juniors, seniors and graduate students have had several years of experience in the online format. In addition, the threaded discussion activities at this higher level of coursework may be more demanding and engaging than the lower level courses. The results give clear indications that the upper classmen have more acceptance and higher levels of interest and engagement in course threaded discussions than the freshmen and sophomores.

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# Assessing the Level of Compliance with the Minimum Academic Standards in Administration of Colleges of Education in Delta State, Nigeria

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#### Abstract

This study was designed to ascertain the performance indicators of colleges of education and the extent for compliance with identified performance indicators in Colleges of Education in Delta State. Five research questions were raised and answered and five hypotheses were formulated and tested. The researcher adopted the survey research design for the study. The population of the study comprised Deans, Heads of Departments and Lecturers in the four colleges of education in Delta State. Purposive random and proportional random sampling techniques were used to select the one hundred and eighty (180) respondents that took part in the study. The instrument for data collection was a questionnaire titled; "Level of Compliance with Minimum Academic Standards, Questionnaire (LCMASQ). In analyzing the data collected, mean and standard deviation were used to answer the research questions, while t-test was used to test the null hypotheses at an alpha level of 0.05. The findings were as follows: (i) lecturers are highly familiar with the crucial performance indicators in the minimum academic standards for NCE in colleges of education (ii) there are setbacks to total compliance with the minimum academic standards, (iii) while the appropriate point to manage these setbacks should be rigorous colleges of education enforcement of the crucial performance indicators among others. It was recommended that there should be improve works environment for lecturers in colleges of education.

**Keywords**: Minimum academic standards, Compliance, Performance, Administration, Colleges of Education

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#### INTRODUCTION

Tertiary education is the major engine that facilitates the growth, development and progress of any nation. Tertiary education has basically statutory functions of producing middle and high-level manpower for national development. This is in addition to providing intellectual training in basic sciences and liberal arts. Ojo (2007) averred that education in all its forms and levels is expected to enrich the individual through:

- Enculturation: progressively equipping the individual with the socio-cultural skills that should enable one to fit neatly into one's immediate society;
- Acculturation: progressive exposure to outside influence from which one can intelligently borrow to expend the horizons provided by one's immediate society;
- Intellectual skills acquisition: for the pursuit of self-development through the acquisition of knowledge in a variety of forms and by a variety of means;
- Affective traits development: progressively improving on the capacity to imbibe attitudes, values and
  other behaviour traits that facilitate one's relationship with fellow human beings as well as one's
  capacity for continuous self-employment;
- Manipulative and psycho-motor skills development: progressively awakening the physical prowess of
  the individual, and progressively working towards a perfect coordination of the activities of the body
  with those of the mind, and
- Inculcation of lifelong learning skills (also called learning-to-learning skills).

Significantly, the benefits an individual will gain from tertiary education are higher subset of the benefits of education in general. For instance, colleges of education are meant to produce highly qualified non-graduate professional teachers for the primary and junior secondary level of education (Anikweze, 2001). Colleges of education are to provide full-time courses in teaching, instruction and training and to conduct courses in education for qualified teachers. In Nigeria, colleges of education are established to train teachers who are to teach in pre-primary, primary and junior secondary schools (Aleburu, 2012). For colleges of education products to attain the broad goals of tertiary education, as well as ensure quality in the preparation of teachers, relevance and professionalism there is need for minimum academic standards. Government enforced the minimum qualification Nigeria Certificate in Education (the NCE), for teachers in Nigeria and mandated the National Commission for Colleges of Education (NCCE) to control the training. As such all colleges of education, both conventional and specialized (colleges of education technical) were mandated to comply with the performance indicators contained in the minimum academic standards documents, for the different individual disciplines such as computer science/biology, physics/ chemistry, mathematics /physics, French/ social studies, education among others. Some of the specifications of the minimum academic standards cut across all the disciplines while others are limited only to the particular disciplines it is meant for. However, there are general concerns expressed by some people that most colleges of education in Nigeria are not complying with the demands specified in the minimum academic standards for compliance by colleges of education. Some of the minimum standards include general educational management, specific curriculum areas (academic matters, personnel and management and facilities/services).

Admittedly, the fact that NCCE lay down minimum academic standards for all programmes of teacher education and accredit their certificates, there are also concern that some colleges of education may be selectively complying with those demands they prefer. In this way some colleges of education may

receive full accreditation while some may not. The decision about the accreditation status of programme is based on the overall score obtained following the classification: full accreditation (100-70 marks), interim accreditation (69-60 marks) and denied accreditation (59-0 marks) (Nwosu &Ugwuoti, 2001). Against this backdrop the study intended to ascertain the extent colleges of education are complying with the minimum academic standards.

#### **Purpose of the Study**

The purpose of this study was to determine the performance indicators of colleges of education and the extent of compliance with identified performance indicators. The study specifically focused on:

- Investigating the crucial performance indicators in the minimum academic standards for NCE in colleges of education;
- Finding how familiar are the lecturers with the crucial performance indicators in the minimum academic standards for NCE in colleges of education;
- Determining how well lecturers do comply with the performance indicators in the minimum academic standards for NCE in colleges of Education;
- Investigating the setbacks to the total compliance with the minimum standards for NCE in colleges of education;
- Ascertaining how colleges of education can reduce the setbacks to compliance with the minimum academic standards for NCE in colleges of education.

#### **Research Questions**

The following research questions are stated for the study:

- What are the crucial performance indicators in the minimum academic standards for NCE in Colleges of Education?
- How familiar are the lecturers with the crucial performance indicators in the minimum academic standards for NCE in Colleges of Education?
- How well do lecturers comply with the performance indicators in the minimum academic standards for NCE in Colleges of Education?
- What are the setbacks to the total compliance with the minimum academic standards for NCE in Colleges of Education?
- How can colleges of education reduce the setbacks to compliance with the minimum academic standards for NCE in co Colleges of Education?

#### **Hypotheses**

The following hypotheses are formulated to guide the study at 0.05 significance level:

There is no significant different between the mean scores of Deans/HOD's and lecturers as regards
the crucial performance indicators in the minimum academic standards for NCE in colleges of
education.

- There is no significant different between the mean scores of Deans/HOD's and lecturers as regards how familiar lecturers are with the crucial performance indicators in the minimum academic standards for NCE in colleges of education.
- There is no significant different between the mean scores of Deans/HOD's and lecturers as regards how well lecturers comply with the performance indicators in the minimum academic standards for NCE in colleges of education.
- There is no significant different between the mean scores of Deans/HOD's and lecturers as regards
  the setbacks to the total compliance with minimum academic standards for NCE in colleges of
  education.
- There is no significant different between the mean scores of Deans/HOD's and lecturers as regards how the college of education can reduce setbacks to compliance with the minimum academic standards for NCE in college of education.

#### REVIEW OF RELATED LITERATURE

#### **National Commission for College of Education Model for Accreditation**

Decree No. 3 of 1989 (that is the National Commission for Colleges of Education Decree), Section 5 (b, c, j, k) authorizes the National Commission for Colleges (NCCE) to:

- Lay down minimum standards for all programmes of teacher education and accredit their certificates and other academic awards after obtaining there of prior approval of the Minister.
- Approve guidelines setting out criteria for all Colleges of Education in Nigeria
- Lay down standards to be attained and continually review such standards.
- Review methods of assessment of students and trainees and develop a scheme of national certification for various products of college of education in collaboration with the Ministries of Education and Universities to which colleges are affiliated.

Clause5k was later modified by the National Commission for College of Education (Amendment Decree, 1992) by eliminating the aspects about "collaboration with Ministries of Educational and Universities... (Nwosu & Ugwuoti, 2001). The decree however limits the NCCE to teacher education programmes offered outside the universities. The NCCE is made up of experts and professional drawn from both within and outside the academic not only to accredit new courses but also to review old ones to ensure that they are complying with the guidelines set. Copies of the accreditation reports are normally sent to the affected institutions so that appropriate remedial measures can be taken where necessary. That is in so far as policy provisions are concerned (Ivowi, 2001).

In the NCCE evaluation model, accreditation constitutes the centre-piece of evaluation process. This process entails checking:

- The quality of teaching;
- The teacher's qualification;
- The programme content and the way it is organized;

- Resources to facilitates learning e.g. Libraries, study centres, laboratories;
- Buildings and classrooms;
- Management and administration;
- Accommodation, social programmes and sports and leisure facilities.

In this, according to Nwosu & Ugwuoti (2001:153-54) evaluation is structured into three broad components viz:

- General educational management
  - o Institutional Organogram
  - Management style and functions of institution Head, Registrar, Bursar and other principal officers.
  - o General facilities public utilities light, water, etc.
  - o Institution wide services : medical, library, transportation, etc.

The above component of the model is qualitative in procedure and reporting.

- Specific curriculum areas. The second component has three structures.
  - Section 1 academic matters
    - Philosophy and objective
    - o Curriculum content
    - Admission requirement
    - Academic regulations
    - Evaluation of students work
    - o Students assessment of the curriculum
    - External moderation system
  - Section II personnel and management
    - Academic staff
    - Non-academic staff
    - Administration of the programme
    - Staff development

- Section III facilities/services: this section is purely quantitative
  - o Laboratories, Workshops, etc.
  - o Classrooms, Lecture theatres, auditoria etc.
  - o Office accommodation
  - Safety and environment
  - o Funding
  - Library

#### Judgment

The decision about the accreditation status of a programme is based on the overall score obtained following the classification below:

- Full accreditation 100 70 marks
- Interim accreditation 69 60 marks
- Denied accreditation 59 0 marks

#### **METHODS**

#### Design

The study employed the survey design. The survey was used to determine the extent of compliance with the minimum academic standards in colleges of education.

#### Sample

The sample of the study consisted of 180 respondents drawn from four colleges of education in Delta State. First all the 24 deans in the four colleges of education in Delta State were purposively sampled. Second, random sampling technique was used to select six Heads of Departments from each of the colleges of education giving rise to a total of thirty-six. Third, proportional random sampling was used to select thirty lecturers from each of the four sampled colleges of education amounting to one hundred and twenty lecturers. Thus, the total sample size for the study was one hundred and eighty (180)

#### **Instrument**

The instrument used for data collection was a researcher developed questionnaire, titled levels of compliance with Minimum Academic Standard Questionnaire (LCMASQ). LCMASQ has two sections, A and B. Section A, sought information on personal data of the respondents such as position, gender and experience. Section B required information on crucial performance indicators, familiarity with the performance

indicators, compliance with the performance indicators, setbacks to the total compliance with the minimum standards for NCE and how colleges of education can reduce the setbacks to compliance with the minimum academic standards for NCE in colleges of education. The instrument was structured on Likert four point summated scale of Strongly Agree (SA) (4 points), Agree (A) (3 points), Disagree (D) (2 points) and Strongly Disagree (SD) (1 point).

#### Validity and Reliability

The face and content validation of the instrument was done by two expects in Educational Administration and one expert in Measurement and Evaluation, from the Delta State University, Abraka. The reliability of the instrument was determined using Crombach Alpha Formula which yields a coefficient of 0.85. This value was considered high enough to permit the conclusion that the instrument was reliable.

#### Administration

The instrument was administered on 24 deans of schools, 36 heads of department and 120 lecturers of the four colleges of education in Delta State.

#### **Method of Data Analysis**

Mean and standard deviation was used to answer the research questions. An overall mean score of 2.50 and above showed that the item is accepted and an overall mean score of below 2.50 showed that an item is rejected, while the t-test statistic was used to test the null hypotheses at an alpha level of 0.05 level of significance.

#### RESULTS

**Research Question 1**: What are the crucial performance indicators in the minimum academic standards for NCE in colleges of education?

Table 1: Mean and standard deviation responses on crucial performance indicators

S/N	Item statement	Deans/HOD's/			Lecturers		
		Mean	SD	Decision	Mean	SD	Decision
1.	Student's entry requirements	2.74	0.83	Accepted	2.68	1.10	Accepted
2.	Staff and Students ratio	2.88	0.86	Accepted	2.97	0.79	Accepted
3.	Student annual growth rates	2.91	1.05	Accepted	2.84	1.10	Accepted
4.	Weighting of programme components	3.07	0.59	Accepted	2.60	0.86	Accepted
5.	Minimum of CA in scoring all exams	3.18	0.90	Accepted	2.78	1.12	Accepted
6.	Inclusion of CA in scoring all exams	3.22	6.87	Accepted	3.05	0.87	Accepted
7.	Duration of programme/semester	3.34	0.74	Accepted	2.94	1.08	Accepted
8.	Minimum credit load	3.50	6.75	Accepted	3.53	0.59	Accepted
9.	Physical Facilities space, computer, services among others	2.57	1.77	Accepted	2.51	0.65	Accepted
10.	Library and laboratory specifications	3.22	0.91	Accepted	3.34	0.59	Accepted

11.	Provision for external examiner for	3.37	0.82	Accepted	3.38	0.68	Accepted
	moderation						

In order to find out the crucial performance indicators in the minimum academic standards for NCE in colleges of education, a list of performance indicators was presented to the respondents to indicate. Given the mid-point of 2.50 in the range of the 4-point scale, data analysis in table 1 above showed that all the items had mean ratings above the mid-point. This indicates that all the items are major performance indicators in the minimum academic stands for NCE in colleges of education. Indeed, more than half of the identified performance indicators received mean ratings of  $\geq 3.0$ . The highest mean ratings of 3.37 - 3.38 was recorded in the case of "provision for external examiner for moderation". On the other hand, physical facilities space, computer services received the lowest mean rating of 2.57-2.51.

**Research Question 2**: How familiar are the lectures with the crucial performance indicators in the minimum academic standards for NCE in college of education?

Table 2: Mean and standard deviation responses on level of familiarity with the crucial performance indicators

S/N	Item statement	Dea	ns/HOD'	S	Lec	turers	
		Mean	SD	Decision	Mean	SD	Decision
1.	Student's entry requirements	3.07	0.59	Accepted	3.02	0.15	Accepted
2.	Staff and Students ratio	2.01	0.70	Rejected	2.00	0.77	Rejected
3.	Student annual growth rates	2.20	0.86	Rejected	2.00	0.93	Rejected
4.	Weighting of programme components	2.11	0.92	Rejected	2.16	0.98	Rejected
5.	Minimum of CA in scoring all exams	3.87	0.35	Accepted	3.76	0.43	Accepted
6.	Inclusion of CA in scoring all exams	3.53	0.52	Accepted	3.76	0.43	Accepted
7.	Duration of programme/semester	2.91	0.88	Accepted	2.69	9.67	Accepted
8.	Minimum credit load	2.71	0.64	Accepted	2.62	0.88	Accepted
9.	Physical Facilities space, computer, services among others	2.63	0.81	Accepted	2.61	0.94	Accepted
10.	Library and laboratory specifications	2.62	0.88	Accepted	2.63	0.81	Accepted
11.	Provision for external examiner for moderation			•			•

In order to rate the extent of familiarity with the performance indicators in the minimum academic standards for NCE in colleges of education, the deans, heads of departments and lecturers were presented the major performance indicators in table 2. From the mean ratings in the table, it can be seen that the respondents are more familiar with students' entry requirements, staff and students ratio, minimum of continuous assessment in scoring all examinations, inclusion of CA in scoring all examinations, duration of programme/semester, minimum credit load, physical facilities space, computer services, library and laboratory specifications and provision for external examiner for moderation having had mean ratings above the 2.50 mid-point in the 4-point scale. The performance indicator which the respondents recorded low familiarity include; staff and student ratio, students annual growth and weighting of programme components.

**Research Question 3**: How well do lecturers comply with the performance indicators in the minimum academic standard for NCE in college of education?

Table 3: Mean and Standard deviation responses on level of compliance with the performance indicators

S/N	Item statement	Dear	ıs/HOD's		Lecturers			
		Mean	SD	Decision	Mean	SD	Decision	
1.	Student's entry requirements	3.13	0.07	Accepted	3.49	0.89	Accepted	
2.	Staff and Students ratio	2.39	1.30	Rejected	2.48	0.96	Rejected	
3.	Student annual growth rates	1.94	1.09	Rejected	1.91	1.07	Rejected	
4.	Weighing of programme components	2.00	0.81	Rejected	2.01	0.94	Rejected	
5.	Minimum of CA in scoring all exams	3.55	0.78	Accepted	3.38	0.83	Accepted	
6.	Inclusion of CA in scoring all exams	3.59	0.69	Accepted	3.55	0.69	Accepted	
7.	Duration of programme/semester	3.42	0.84	Accepted	3.42	0.66	Accepted	
8.	Minimum credit load	3.59	0.69	Accepted	3.51	0.70	Accepted	
9.	Physical Facilities space, computer, services among others	2.10	0.93	Rejected	2.04	0.93	Rejected	
10.	Library and laboratory specifications	2.15	0.92	Rejected	2.16	0.90	Rejected	
11.	Provision for external examiner for moderation	3.22	0.87	Accepted	2.18	0.90	Accepted	

In order to find out how well the deans, heads of departments and lecturers complied with the identified major performance indicators, they were expected to rate themselves on each of the indicators as shown in table 3 above. From the mean ratings in the table, it can be seen that the performance indicators which the respondents highly comply with are students' entry requirements, minimum of CA in scoring all examinations, inclusion of CA in scoring all examinations, duration of programme/semester, minimum credit load, and provision for external examiner for moderation having had mean ratings above the 2.50 mid-point in the 4-point, rating scale. The performance indicators that received low compliance were, staff and students ratio, students annual growth rates, weighting of programme components, physical facilities-space, computer services and library and laboratory specifications.

**Research Question 4**: What are the setbacks to the total compliance with the minimum academic standards for NCE in colleges of education?

Table 4: Mean and Standard deviation responses on the setbacks to the total compliance with minimum academic standards for NCE

S/N	Item statement	Dea	n / HOI	)'s	Le	ecturers	
		Mean	SD	Decision	Mean	SD	Decision
1.	Uninspiring work environment occasioned by poor salaries and salary delays	3.19	6.08	Accepted	3.79	0.03	Accepted
2.	Laziness on the part of some lecturers in finding out the major performance indicators and complying with them	3.98	0.11	Accepted	3.95	0.04	Accepted
3.	Lecturers insistence that some of the major performance indicators are not their responsibility (students' growth rates, entry requirements and staff and students ratio	2.71	0.34	Accepted	3.58	0.02	Accepted
4.	Poor status of library, laboratory, studies and workshop facilities	3.83	0.05	Accepted	3.71	0.09	Accepted
5.	Deplorable environment of work such as those of work such as those of office space shortage	3.78	0.03	Accepted	3.98	0.08	Accepted
6.	Lack of computer and other ICT facilities	3.89	0.05	Accepted	3.75	0.06	Accepted

	such as photocopiers, fax and so on						
7.	Shortage of consumables such as stationary,	3.91	0.04	Accepted	3.59	0.13	Accepted
	chemicals etc.						
8.	Shortage of academic and support staff	3.51	0.12	Accepted	3.75	0.06	Accepted
9.	Shortage of facilities for reducing work-	2.93	0.26	Accepted	2.98	0.03	Accepted
	related stress.						

Given a 2.50 mid-point in the 4-point rating scale, data analysis in table 4 above show that all the items had mean ratings above the mid-point. This indicates that all the items are setbacks to the total compliance with the minimum academic standards for NCE in colleges of education. Indeed, more than half of the identified setbacks received mean ratings of  $\geq 3.0$ . The highest mean rating of 3.98-3.95 was recorded in the case of "laziness on the part of some lecturers in finding out the major performance indicators and complying with them". On the other hand, "lecturers insistence that some of the major performance indicators are not their responsibility (students' growth rates, entry requirements and staff and student ratio)" receive the lowest mean rating of 2.71-3.38.

**Research Question 5**: How can colleges of education reduce the setbacks to compliance with the minimum academic standards for NCE in college of education?

Table 5: Mean and standard deviation responses on how the setbacks to compliance with the minimum academic standards can be reduce.

S/N	Item statement	Γ	ean / HC	DD's	Lecturers			
		Mean	SD	Decision	Mean	SD	Decision	
1.	Periodic provision to all lecturers all documents listing all the performance indicators and the role of lecturers on each of them and the holding of periodic workshop on them for lecturers	2.60	0.99	Accepted	2.62	1.12	Accepted	
2.	Limiting the present frequent work stoppage in colleges of education	2.63	1.03	Accepted	2.66	1.06	Accepted	
3.	Significant improvement in funds allocation to colleges of education and ensuring that funds specifically targeted for the provision of teaching and research facilities are properly utilized	2.64	1.10	Accepted	2.75	1.09	Accepted	
4.	Resisting undue interference and pressure from outsiders on colleges of education admission and others	2.60	0.99	Accepted	2.71	1.06	Accepted	
5.	Rigorous colleges of education enforcement of the crucial performance indicators	3.53	0.81	Accepted	3.36	0.75	Accepted	

Given a 2.50 mid-point in the 4-point rating scale, data analysis in table 5 above show that all the items had mean ratings above the mid-point, indicating that effective application of the strategies can reduced the identified setbacks to compliance with the minimum academic standards for NCE in colleges of education. Indeed, majority of the strategies received mean ratings of  $2.60 \ge$ . The highest mean rating of 3.53-3.36 was recorded in the case of "rigorous colleges of education enforcement of the crucial performance indicators". On the other listing all the performance provision to all lecturers all documents listing all the performance

indicators and the role of lecturers on each of them and the hold of periodic workshop on them for lecturers" received the lowest mean rating of 2.50.

#### **Hypotheses Testing**

Table 6: T-test analysis of the difference between Deans/HOD'S and lecturers on crucial performance indicators in the minimum academic standards for NCE

Group	Mean	SD	Number	DF	Level of Significance	Calculated t-value	Critical table values of t	Decision
Deans/HOD'S	40.09	10.09	60	178	0.05	0.039	1.96	Accepted
Lecturers	32.22	9.43	120					

Table 6 presented the t-test on the significant difference between Deans/HODs and lecturers on crucial performance indicators in the minimum academic standards for NCE. From the table, the calculated t-value is less than the critical table value of t, therefore the null hypothesis is accepted. This indicated that there is no significant difference between Deans/HODs and lecturers on crucial performance indicate in the minimum academic standard for NCE in college of education.

Table 7: T-test analysis of the difference between Deans/HOD's and lecturers on how familiar lecturers are with the crucial performance indicators in the minimum academic standards for NCE

Group	Mean	SD	Number	DF	Level of Significance	Calculated t-test	Critical table values of t	Decision
					Significance	t-test	values of t	
Deans/HOD'S	30.79	7.14	60	178	0.05	1.653	1.96	Accepted
Lecturers	30.74	7.88	120					

Table 7 presented the t-test on the significant difference between Deans/HOD's and lecturers on how familiar lecturers are with the crucial performance indicators in the minimum academic standards for NCE. From the table, the calculated t-value is less than the critical table value of t, therefore the null hypothesis is accepted. This indicated that there is no significant difference between Deans/HOD's and lecturers on how familiar lecturers are with the crucial performance indicators in the minimum academic standards for NCE in colleges of education.

Table 8: T-test analysis of the difference between Dean's/HOD's and lecturers on how well lecturers comply with the performance indicators in the minimum academic standard for NCE

Group	Mean	SD	Number	DF	Level of Significance	Calculated t-test	Critical table values of t	Decision
Deans/HOD'S	31.71	8.99	60	178	0.05	-9613	1.96	Accepted
Lecturers	31.73	9.47	120					

Table 8 presented the t-test on the significant difference between Deans/HODs and lecturers on how will lecturers comply with the performance indicators in the minimum academic standards for NCE. From the table, the calculated t-value is less than the critical table value of t, therefore the null hypothesis is accepted. This indicated that there is no significant difference between Deans/HODs and lecturers on how well lecturers comply with the performance indicators in the minimum academic performance standards for NCE in colleges of education.

Table 9: T-test analysis of the difference between Deans/HOD's and lecturers on the setbacks to the total compliance with minimum academic standards for NCE

Group	Mean	SD	Number	DF	Level of	Calculated	Critical table	Decision
					Significance	t-test	values of t	
Deans/HOD'S	31.73	0.98	60	178	0.05	-2.848	1.96	Rejected
Lecturers	33.08	0.54	120					

Table 9 presented the t-test on the significant difference between Deans/HODs and lecturers on the setbacks to the compliance with minimum academic standards for NCE. From the table, the calculated t-value is less than the critical table value of t, therefore the null hypothesis is accepted. This indicated that there is no significant difference between Deans/HODs and lecturers on the setbacks to the total compliance with minimum academic performance standards for NCE colleges of education.

Table 10: T-test analysis of the difference between Deans/HOD's and lecturers on how to reduce the setbacks to compliance with the minimum academic standards for NCE

Group	Mean	SD	Number	DF	Level of Significance	Calculated t-test	Critical table values of t	Decision
Deans/HOD'S Lecturers	13.98 14.12	4.92 5.08	60 120	178	0.05	-7.268	1.96	Accepted

Table 10 presented the t-test on the significant difference between Deans/HOD's and lecturers on how to reduce the setbacks to compliance with the minimum academic standards for NCE. From the table, the calculated t-value is less than the critical table value of t, therefore the null hypothesis is accepted. This indicated that there is no significant difference between Deans/HOD's and lecturers on how to reduce the setbacks to compliance with the minimum academic standards for NCE.

#### **DISCUSSION**

Results on research question one showed the major performance indicators in the minimum standards for NCE in colleges of education as presented in Table 1. This indicated that there are documents on the performance indicators available to the lecturers. Furthermore, analysis of the difference between Deans/HOD's and lecturers on crucial performance indicators showed that there is no significant difference between Deans/HOD's and lecturers on crucial performance indicators in the minimum academic standards for NCE in colleges of education.

The result based on research question two however showed that the respondents are not familiar with all the major performance indicators in the minimum academic standards for NCE in colleges of education. The performance indicators the respondents were highly familiar with were students' entry requirements, minimum of CA in scoring all examinations, inclusion of CA in scoring all examinations, duration of programme/ semester, minimum credit load, physical facilities-space, computer, services, library and laboratory specifications and provision for external examiner for moderation. Also, analysis of the difference between Deans/HOD's and lecturers on their familiarity with the performance indicators showed that there is no significant difference between Deans/HOD's and lecturers on how familiar lecturers are with the crucial performance indicators in the minimum academic standards for NCE in colleges of education.

Result on research question three showed that there was high overall compliance with the performance indicators in the minimum standards for NCE in colleges of education. However there were some indicators that received low compliance such as staff and students ratio, student annual growth rates,

weighting of programme components, physical facilities-space, computer, library and laboratory specifications. Furthermore, analysis of the difference between Deans/HOD's and lecturers on how well lecturers comply with the performance indicators showed that there is no significant difference between Deans/HOD's and lecturers on how well lecturers comply with the performance indicators in the minimum academic standards for NCE in colleges of education.

Research question four showed both that setbacks identified tend to reduce the level of lecturers compliance with the minimum academic standards for NCE in colleges of education. Among the setbacks are laziness on the part of some lecturers in finding out the major performance indicators and complying with item, uninspiring work environment accessioned by poor salaries and salary delays, poor status of library, laboratory, studies and workshop facilities, deplorable environment of work such as these of office space shortage, shortage of facilities for reducing work-related stress among others. Also, analysis of the difference between Deans/HOD's and lecturers on the setbacks on the performance indicators showed that there is no significant difference between Deans/HOD's and lecturers on the setbacks to the total compliance with minimum academic standards for NCE in colleges of education.

Research question five showed that all the strategies identified on how to reduce the setbacks to compliance with the minimum academic standards for NCE in colleges of education are effective. Therefore, an appropriate point to start the reduction of those setbacks to enhance effective compliance by lecturers with the minimum standards should be rigorous colleges of education enforcement of the crucial performance indicators. Others include; limiting the present frequent work stoppage in colleges of education, significant improvement in funds allocation to colleges of education and ensuring that funds specifically targeted for the provision of teaching and research facilities are properly utilized. Furthermore, analysis of the difference between Deans/HOD's and lecturers on how to reduce the setbacks showed that there is no significant difference between Deans/HOD's and lecturers on how to reduce the setbacks to compliance with the minimum academic standards for NCE in colleges of education.

#### CONCLUSION AND RECOMMENDATIONS

The study set out to investigate the performance indicators of colleges of education and the extent of compliance with identified performance indicators in colleges of education in Delta State. The results showed that lecturers are highly familiar with the crucial performance indicators in the minimum academic standards for NCE in colleges of education. It equally showed that there are setbacks to total compliance with the minimum academic standards, while the appropriate point to manage these setbacks should be rigorous colleges of education enforcement of the crucial performance indicators among others. It is therefore recommended that there should be more focus oriented and adequate funding of colleges of education. Second, management should as a matter of urgency improve the work environment for lecturers in colleges of education.

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# Awareness and Views of Farming Households regarding Land Resource Degradation and Conservation-the case of Bule Hora, Ethiopia (2013)

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### Abstract

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Identification of land degradation and its conservation techniques is of interest to and knowledge of land users. Hence, decisions to conserve land resources are largely determined by farmers' knowledge of the problems and perceived benefits of conservation intervention. However, these issues have received little attention in conservation planning. Hence, past efforts did not bring significant change. Pursuing participatory approach has been strongly recommended. The objective of this study is to assess awareness and views of farmers' regarding land resource degradation and conservation. Formal household survey questionnaires, key informants' interview, field observation, official records and informal interview were used to generate data. The results show that all interviewed farmers have reported the existence of soil erosion and deforestation problems and the majority prioritized conservation of these resources first among others. Unlike the causes of deforestation, majority of the farmers didn't aware most of the causes of soil erosion. Farmers also have noticed different consequences of soil erosion with Declining of soil fertility (64%) and farm land productivity (59%) were ranked from firs to second by the majority. 92% of the farmers believed that soil erosion could be reduced and they used a range of practices but not widespread due to some technological, institutional and household attributes. More than 66% of the respondents also aware increasing of fire wood price, frequency of drought, temperature and wind velocity, as well as land productivity decline and Loss of water sources as the consequence of deforestation. Also, respondents have favorable attitude towards land degradation and conservation in that the majority were agreed and disagreed to positive and negative likert type scale statements respectively. We believe our findings could have a profound implication on policy issues related to genuine participatory land conservation and to rehabilitate the degraded land.

**Keywords:** farmers' awareness, farmers' view, land resource degradation and conservation.

Reference to this paper should be made as follows:

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### INTRODUCTION

Land degradation has been defined as a process of soil degradation through water erosion and loss of vegetation cover leading to reduced productivity of the land in densely settled or exploitatively used regions (Gamachu, 1988). Ethiopia is one of the most severely affected countries where deforestation, soil erosion and degradation of agricultural land are very common and serious problems. It was estimated that 2 million hectares of lands have been severely degraded in Ethiopian highlands (Jaggar & Pender, 2003). The country has lost over 1.5 billion tons of topsoil from these highlands by erosion annually (Tadesse, 2001).

Deforestation is also very series problem. Uncontrolled encroachment and clearing of forest land has been also on process and will continue until management plans are put in place which balance the conservation and sustainable production (Bekele, 2004). Ethiopia has lost 14 percent of its forest cover in between 1990 and 2005 (FAO, 2005). Forest in general has shrunk from covering 65 percent to 2.2 percent of the country and 90 percent to 5.6 percent of the highlands (Keyzer & Sonneveld, 2003). It was also estimated extent of deforestation from 80 000 to 200,000 hectares per year mainly due to expansion of rain fed agriculture (NCSE, 1997).

Land degradation and the consequent productivity reduction, has reduced the once prosperous communities to poverty and food insecurity. More specifically, cost of land degrading in developing countries vary from less than 1% to more than 9% of their respective GNP with estimate of Ethiopia being 6% to 9% GNP[8]. However, not all areas of the country are equally suffering. Both the extent and severity of the problem manifest spatial variations depending on difference in relief, ecology, rainfall, land use, land cover and soil types (Gamachu, 1988; Barbier & Bishop, 1995).

Effective control of soil erosion is a critical component of natural resource management when the aim is to achieve sustainable agriculture and acceptable ecosystem integrity (Pimentel et al., 1995; Tamene et al., 2006). Soil conservation measures that have been used to date include the construction of terraces, soil bunds, micro-basins, the protection of regenerating natural vegetation, and tree planting. Despite the efforts that have been made to conserve as well as restore soil fertility of arable lands, soil degradation is proceeding so fast nowadays that it can constraint the hope of achieving sustainable agriculture and economic development strategy of Ethiopia in the foreseeable future. Farmers are rarely consulted about their specific circumstances and priority problems before applying large scale land resources conservation program (Bewket, 2003). However, Land degradation is closely aligned with the interests of farmers so that early identification of risk-prone areas and land management techniques is of interest to land user (Stocking & Niamh, 2000). Farmers' perception of land degradation by soil erosion is a key social factor that is important in deciding options for controlling soil losses (Graaff, 1993). Under the current conditions, soil and water conservation interventions should consider farmers' conservation knowledge and practices to improve the possibility of adoption of the recommendations (Amsalu & Degraaff, In Press). Bottom-top approach by understanding local issues on the basis of local knowledge is a key component of successful SWC programs (GTZ, 2005). These literatures highlight the need to further investigation in different specific localities.

The general objective of this study is to assess awareness and views of farming households regarding land resource degradation and conservation. The specific objectives are:

- To assess farmers' awareness of land resource degradation and conservation;
- To assess farmers' attitude regarding land resource degradation and conservation;
- To identify the barriers of land resource conservation;
- To find out efforts made by the local authorities and Farmers in conserving land resource.

The term land resource and land resource conservation is a wide concept that includes different aspects of the environment, social, economic, political and cultural aspects of society. Thus, by considering the broad

aspect of the concept, the researcher tries to focus on farmers' awareness and views regarding degradation and conservation of one abiotic resources i.e. soil and one biotic resources i.e. forest.

### **METHODS**

### **Description of the Study Area**

Bule Hora woreda is located at 5°35′ N Latitude and 38°15′E Longitude. It is located at the north direction of Borena Zone. The capital center of the woreda is found at 467 Km from Addis Ababa to the south direction being crossed by Addis Ababa Moyale international road. Area of the woreda is 132,703.19 ha. Topography of the woreda is undulating with plain, mountain, valley and low plateaus. Agro – climatically, about 55% of the total area of the district falls under Wayina dega. The remaining 11% & 34% falls under dega & kola Agro- climatic zones respectively. There are two major rainy seasons namely Spring & Autumn in which spring is the major crop season. Red and Brown soil are covering the largest part of the woreda. The district has varieties of vegetation ranging from high forest to totally uncovered Areas. Natural and plantation forest covers 18,413ha and 1567 ha respectively. Regarding the energy source, Firewood, Crop residue, Charcoal, Kerosene and Dung are 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> source of energy respectively in order of their Supply both in rural and urban part of the woreda.

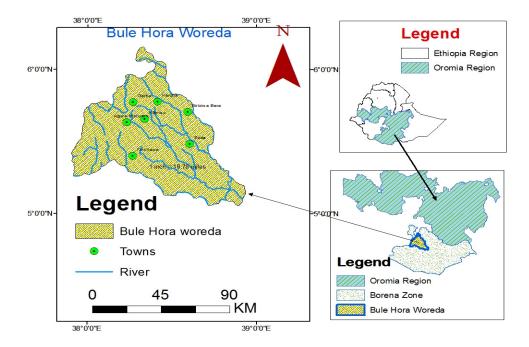


Figure-1 Map of the study area, Source: Ethio-GIS and CSA, 2007

# Research design, Data Source, data gathering tools

To describe and summarize responses of the sample farmers, descriptive statistical analysis was used. Among 45 peasant associations (PAs), Buleqagna, Denbelahara and Cherigololcha were selected for the samples. The totals of 100 sample households were selected proportionally on the basis of place of residence and gender using stratified and purposive sampling. Data was collected from both primary and secondary source. Primary data source were farmers, woreda's land resource conservation experts and development agents. Secondary data source includes official records and project reports. Questionnaires survey, Key informants interview and Field observation were methods of data gathering. To increase validity and

reliability of questionnaire, its initial version was reviewed by colleagues, Care was given to avoid sequential bias in responses, questionnaire was Pre-tested and interview began with a brief overview of the purpose.

# Method of data Analysis

Both quantitative and qualitative methods of data analysis were employed. Qualitative data which was generated through secondary sources, interview and field observation was analyzed qualitatively throughout the analysis. Quantitative data was interred in to Statistical package for Social Sciences (SPSS, version 16) and analyzed by using descriptive statistics.

### RESULTS AND DISCUSSION

# **Demographic and Socio-Economic Characteristics of Sample farmers**

Sample farmers were found in adulthood age as their mean age is about 40. They are characterized by large family size with the average size is 10.4 and standard deviation is 5.025. Their activities were associated with occupations such as farming, animal husbandry, and mining with limited education. Their average land holding size is 2.3 hectare. Their average holding of cattle, sheep and goat, and Pack animal are 7, 3.03 and 0.97 respectively which were reliant on heavily overgrazed lands. As illustrated in figure 2, the area was generally food insecured. Due to food insecurity, farmers could be forced to mine soils and to get rid of trees.

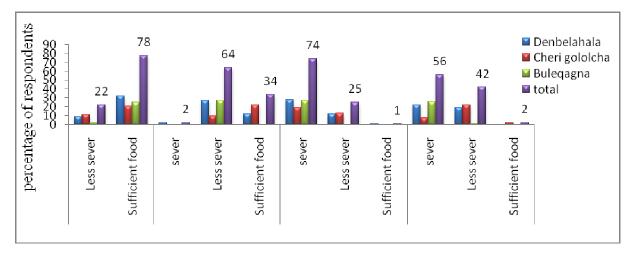


Figure 2: Level of food shortage across sample PAs

# **Farmers' Priority**

Five environmental issues were presented to farmers to identify their priority of the issue that need relatively more attentions by the Government at present time. As indicated in figure 3, the majority (51%) replied that Land resource conservation needs relatively much attention over others.

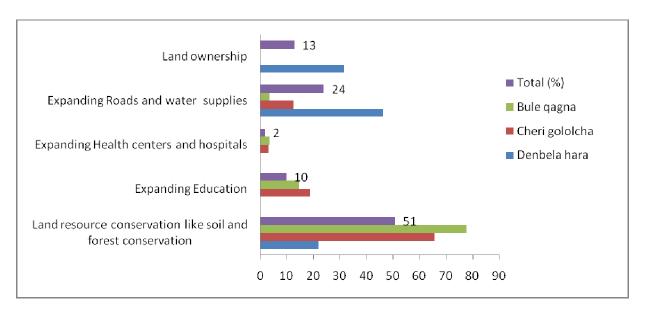
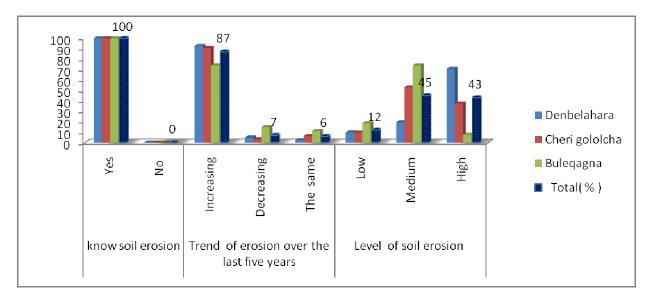


Figure 3: Households' response on issue that need relatively more attention by Government at the current time

# Farmers' awareness of soil erosion and conservation practices

# Farmers' familiarity of soil erosion, its trend and level

All of the interviewed farmers have noticed the existence of soil erosion. Some farmers also mentioned that they perceived soil erosion mostly when rills and gullies were appeared. But, Soil erosion can also exist without visible signs. Hence, education concerning different indicators of soil erosion existence and its impact would benefit farmers much to perceive and reverse the problem. The majority of respondents rated level of soil erosion from medium to high and as it has increasing trend over the last five years.



Source: Field Survey, 2012

Figure 4: Distribution of farming households by their perception to existence of soil erosion, its trend and level

### Causes of Soil Erosion

There are combinations of human and natural causes of soil erosion which results in a lowering of the capability of the land for a set of possible uses. With the exception of over grazing (53%), rugged topography (63%), deforestation (100%) and absence of soil conservation measures (82%), most of the causes were not recognized by the majority of the respondents which suggests the need for awareness creation among them.

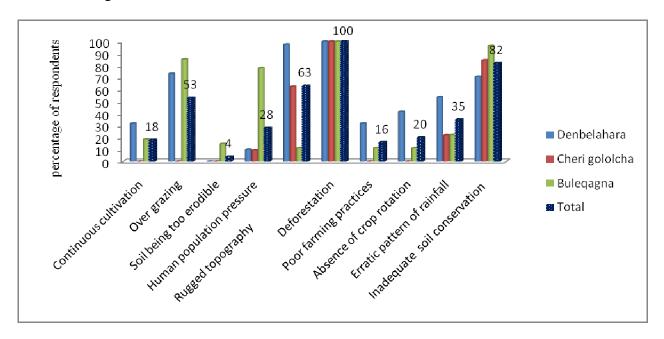


Figure 5: Distribution of farming households by their awareness about causes of soil erosion

### Consequence of Soil Erosion

Cultivation of land without adequate soil conservation measures has resulted in soil impoverishment in many parts of Ethiopia through soil erosion and, in some cases, total loss of agricultural land. As indicated in table 1, declining of soil fertility, declining of farm land productivity, gully formation, increase the requirement for fertilizers, difficulty for farming, landlessness and migration were listed in their order of perceived severity by the interviewee with mean rank of 2.59, 2.77, 3.15, 4.04, 4.61, 4.64 and 6.17 respectively. Generally, all of the respondents had good consciousness about effect of soil erosion but with varied priorities.

Table 1. Farmers' perception about Consequence of soil erosion

Consequences		Rank						Mean
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	$7^{\text{th}}$	rank
Declining of soil fertility	35.0	29.0	9.0	7.0	11.0	7.0	2.0	2.59
Increase fertilizers requirement	4.0	8.0	47.0	6.0	9.0	8.0	18.0	4.04
Declining of farm land productivity	26.0	33.0	12.0	10.	10.	4.0	5.0	2.77
Gully formation	23.0	11.0	10.0	45.0	8.0	1.0	2.0	3.15
Landlessness due to soil removal	10.0	6.0	8.0	16.	12.	42.0	6.0	4.64
Difficulty for farming	1.0	12.0	6.0	14.	44.	19.0	4.0	4.61
Migration	1.0	1.0	9.0	2.0	6.0	18.0	63.0	6.17

Source: Field Survey, 2012

# Farmers' familiarity of deforestation, its intensity, causes and consequences

Deforestation is a serious problem in Ethiopia which has led to a decline in vegetation cover over time, soil erosion, destruction of wildlife and their habitat. All the interviewed farmers aware deforestation as the problem in their locality. Even though, differences were observed among farmers' perception to the level of deforestation across sample PAs, 42% and 40% of the respondents rated the level of the problem as high and medium respectively (see Table 2). Land covered with a closed and open stand of trees were deforested due to Cutting and Burning of forest land to expand agricultural land (82%), consumption of fuel wood for local use and charcoal for urban use and other necessities(97%); Expansion of Settlements(77%) and Expansion of grazing land (73%). On the whole, respondents aware drivers of deforestation very well perhaps because one cause seldom act independently of other causes and in many cases follow a progression. Decreased land productivity, increased soil erosion, increase in money to fire wood, increase in frequency of drought, loss of water sources, increase in temperature and increase in wind velocity were replied as the consequence of deforestation by 88%, 93%, 72%, 95%, 67%, 87% and 67% of the respondents respectively(see figure-6 next).

Table 2: Farmers' familiarity of deforestation, its intensity and causes

T4		Percentag	Total		
Items	category	Denbela hara	Cheri gololcha	Bule qagna	(%)
	High	75.6	21.9	14.8	42.0
	medium	14.6	62.5	51.9	40.0
level	low	9.8	15.6	33.3	18.0
le	Total	100.0	100.0	100.0	100.0
	Cutting and Burning of forest land to expand agricultural land	97.6	53.1	92.6	82.0
es	Human consumption for fuel and other necessities	100.0	96.9	92.6	97.0
Causes	Expansion of grazing land and fodder	97.6	31.2	85.2	73.0
C	Expansion Settlements	97.6	37.5	92.6	77.0

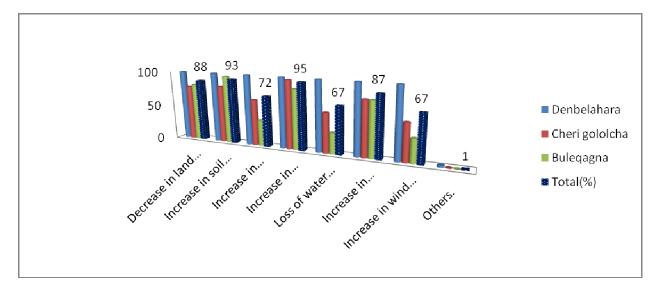


Figure 6: Farmers' awareness on consequence of deforestation

### **Land Resource Conservation Measures**

Cropland and rangeland in the study area have undergone degradation. Traditional ways of farming can no longer fulfill the increased demand for food of the growing population. Soil also can simply not sustain farming with short or no fallow period. Inadequate land management is one of the main causes for land degradation which is contributing to decline of productivity and sustainability of agriculture. Even though unsustainable situation must be changed with Sound SWC practices and the majority of respondents (92%) believed that soil erosion could be reduced, most SWC measures were not implemented at a great to a fair extent (see table 3). Contour plowing, organic manure/dung and mixed cropping were practiced by 85%, 72% and 53% of respondents from a great to a fair extent. Among different conservation techniques mentioned in table 6, tree planting, making water ways, check dam, grass planting on water ways, micro basin and terraces are the newly introduced measures in the study area and were not practiced widely as compared with indigenous techniques. This may be because, the target of introduced practice was directed to districts with different erosion intensity rather than areas with the greatest need (see figure 7&8).



Figure 7: Bad land but without conservation



Figure 8: Good land but with conservation

Table 3: Farmers' perception to soil erosion minimization and conservation practices

Item	Option	Percentage of respon	Total			
		Denbela hara Cheri gololcha Buleqagna				Percent
Soil erosion could be	Yes	87.8	93.8	96.3	92	92.0
minimized	No	12.2	6.2	3.7	8	8.0
	Total	100.0	100.0	100.0	100	100.0

SWC Practices	A great extent □	A fair extent <sup>□</sup>	Not much <sup>□</sup>	Never□	Mean Score	Rank By score
Fallowing	5.0	33.0	31.0	31.0	2.12	5
Terracing	00	12.0	23.0	65.0	1.27	13
Check dam	1.0	16.0	15.0	68.0	1.5	10
Micro bansine	00	13.0	13.0	74.0	1.39	12
Mulching	5.0	17.0	19.0	59.0	1.68	8

Contour plowing	58.0	27.0	12.0	3.0	3.4	1
Rotation grazing	3.0	31.0	31.0	35.0	2.02	7
Tree planting	00	27.0	56.0	17.0	2.1	6
Crop rotation	19.0	33.0	34.0	14.0	2.57	3
Making water ways	3.0	18.0	16.0	63.0	1.61	9
Organic manure/dung	19.0	53.0	20.0	8.0	2.83	2
Mixed cropping	11.0	42.0	23.0	24.0	2.4	4
Grass planting on	3.0	8.0	18.0	71	1.43	11
water ways						

<sup>□</sup> represents Scale: A great extent =4, A fair Amount=3, Not much=2 and Never=1.

The woreda officials' were also asked their roles in conserving land resources. The following roles were mentioned:

- ✓ Developing plan of natural resource conservation mainly soil, water and plants
- ✓ Assign three DAs in each PAs
- ✓ Organizing farmers in different teams for the purpose of conserving land. The common farmers' teams organized by woreda officials were two. The first teams was the one to five teams in which one role model farmer was coordinating the other five farmers in each groups for conserving land recourses. The second teams were formed by taking the leaders from the first teams and has 25 to 30 members who were participating jointly to conserve their land.
- ✓ Assigning regular contact person from the role model farmers to reinforce communication.
- ✓ They provide training on soil, forest and water conservation.
- ✓ Reporting works done in area of land conservation for the concerned body.

### **Factors Affecting Land Resource Conservation**

There are different factors affecting farmers' soil and water conservation practices. Major barrier related to households' attributes was Lack of awareness about amount of soil loss per year (38%) followed by Shortage of labor (25%). Among institutional factors, low credit availability (78%) and applying new SWC technologies before consulting farmers (82%) were mentioned by the majority. In addition, Presence of different drawback—associated with introduced SWC measures such as narrowing land, inconvenient for tillage and damage of structures by rain or livestock were the other limiting factor explained by the majority (51%). It was also observed that infrastructure and access to markets were not good. If a good road system and competitively priced transport provide access to urban markets with high demand crops, crop values will increase, resulting in higher incentives to conserve land for long-term gain.

Table 4: Households' perception about factors affecting land resource conservation practices

Item	Options	Percentage of resp	Total		
		Denbela hara	Cheri gololcha	Bule qagna	%
Main barrier related to households' attributes	Shortage of labor force	4.9	46.9	29.6	25.0
	Lack of time	00	15.6	3.7	6.0
	Lack of interest	2.4	3.1	3.7	3.0
	Lack of awareness about amount of soil loss per year	53.7	3.1	55.6	38.0
	There is no hindrance factor	14.6	31.2	00	16.0

# Farmers' Attitude Towards Land Degradation and Conservation

To assess the attitude of farmers about land degradation and conservation, likert type items were provided to nominate whether they agreed, undecided or disagreed. The scale goes from 1 (unfavorable attitude) to 3 (favorable attitude) for a positive statement and vice versa for negative statement. Majority of the respondents agreed and disagreed to positive and negative statements respectively. With the exception of two items (4&5) in table 5 below, the mean score of respondents to the rest of the items are between 2.55 and 2.78 which are approaching to the highest scale (3) and hence most of respondents have favorable attitude to

	Land tenure insecurity	24.4	00	7.4	12.0
Total Control	Unavailability of DA when	12.2	50.0	7.4	23.0
Institutional attributes	farmers seek advice				
	Low Credit availability	97.6	71.9	55.6	78.0
	Introduce new technology before consulting farmers	97.6	53.1	92.6	82.0
SWC technological attributes	Presence of different problems associated with introduced SWC measures	26.8	65.6	70.4	49.0

their land.

Table 5: Percentage and mean score of respondents' attitude about land degradation and conservation

Statements making up the attitude scale	Total Percentage of respondents			espondents
	A	UD	DA	Mean score
1. Soil erosion is not the threat in Bule Hora.	13.0	4.0	83.0	2.70
2. The community should not be concerned about deforestation as far as firewood is needed.	11.0	11.0	78.0	2.67
3. It is unnecessary to think for the coming generation if utilization of soil and forest satisfies the present generation.	12.0	9.0	79.0	2.67
4. Energy uses of forest are important than its aesthetic value.	28.3	14.1	57.6	2.29
5. Protecting forest is preferable than expanding farmlands.	54.0	14.0	32.0	2.22
6. There is no problem of water shortage in Bule Hora woreda.	14.0	10.0	76.0	2.62
7. It is wastage of time to control soil erosion.	9.0	10.0	81	2.72
8. Cash or food should be given to individuals if they are participating in SWC activities.	16.0	13.0	71	2.55
9. Land resource conservation doesn't concern me.	5.0	12.0	83	2.78
10. The community should not be accountable to conserve their land as they have less capability.	14.0	11.0	75	2.61
11. Government is more responsible to manage forest than local communities.	7.0	13.0	80	2.73
12. There is no need to plant trees as it is time consuming	9.0	10.0	81	2.72
13. Mixed cropping can reduce soil erosion.	78.0	12.0	10	2.68

Key: A-Agree, UD-undecided and D-Disagree

### **CONCLUSION**

This paper addresses the issue of land resource degradation and conservation with the aim of assessing farmers' awareness and views. To attain this intention, descriptive statistical analysis was used. The results show that all interviewed farmers have noticed the existence of soil erosion and deforestation problems and the majority prioritized conservation of these resources first among others. The majority of farmers said that land degradation in the form of soil erosion and deforestation is increasing and the levels of these problems were rated from medium to high. Farmers had relatively better awareness of the causes and consequences of deforestation than soil erosion. Different land resource conservation measures were practice in the area but not widespread. Particularly, introduced conservation measures were not common and there were no result show sites before disseminating new technologies to the farmers. It was also found that some technological, institutional and household factors were limiting farmers' active participation in land resource conservation. The analysis also shows that the respondents have favorable attitude towards land degradation and conservation in that the majority were generally agreed and disagreed to positive and negative Likert type scale statements respectively. We believe that this study could contribute to policy interventions for land conservation that take into account farmer awareness and views of the problem, their priorities and the conditions that influence their decisions. This analysis also contributes to the body of literature in the field of land degradation and conservation as well as to make good use of farmers' knowledge in the area. The findings could be extended to other areas with similar agro-ecological and socio-economic settings. As it is obvious that land degradation and conservation is complex that is linked to different physical, social, economic and institutional systems, further studies on the issue should continue to bring the magnitude of the problem to the community and high level policy makers in order to rehabilitate the degraded natural resources.

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