Instructors’ knowledge, attitude and practice of differentiated instruction: The case of college of education and behavioral sciences, Bahir Dar University, Amhara region, Ethiopia

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**Abstract:** The purpose of the study was to explored instructors’ knowledge, attitude and practice of differentiated instruction in the case of the College of Education and Behavioral Sciences of Bahir Dar University, Ethiopia. The study employed a qualitative research approach with case study design. The participants were the dean, department heads and instructors of the College of Education and Behavioral Sciences, Bahir Dar University. They were purposively selected on the basis of teaching experience and experience outside Ethiopia. Interview and FGD were used to collect data in this study. The data received were analyzed and interpreted through narration using data-driven categories formed within the scope of the three themes, i.e., instructors’ knowledge, attitude and practice of DI. The results of the analysis showed that instructors had a positive attitude towards DI. But, they showed a moderate level of knowledge of DI and it was not properly practiced yet as expected for a number of reasons disclosed in the report. It was then concluded that the prevailing practice of DI was poor. In addition to this, the trend of using the...
lecture method and assessing students based on paper and pencil tests were emphasized at the College. To overcome this, it was suggested that the current mode of teaching which focused on the traditional lecture method should be minimized and complemented with the implementation of other indirect instructional strategies. It was further noted that the traditional paper-pencil assessments should be either supplemented or complemented with other authentic assessment techniques like portfolio evaluation, performance and product assessments.

Subjects: Education Studies; Inclusion and Special Educational Needs; Curriculum Studies

Keywords: Teachers’ knowledge; teachers’ attitude; teachers’ practices; differentiated instruction

1. Background of the study

There is an increase in academic diversity of students in the contemporary classrooms in that no two students learn in the same approach or at the same pace. Each student is unique and has different learning styles and preferences. Instructors are expected to meet the needs of all learners in these diverse classrooms. This presents daily challenges for the instructors to address the learning needs of the students (Villegas & Lucas, 2007). Differentiated instruction (hereafter DI) is a highly effective means of educating diversities found in the College classrooms whereby instructors can meet the unique learning needs of all students in their respective classes (George, 2005).

Instructors need to customize their instructional delivery, assignments and other instructional components to address the needs of all learners and create opportunities for the success of all. The successful adoption of DI depends on the willingness, commitment, readiness and support provided by instructors to the diverse learners as facilitators’ of the learning process. Instructors play a primary role in the application of DI in classrooms and as a result they have the key to successful implementation of DI strategies.

In the implementation of DI, it is possible to say that instructors’ knowledge and attitude plays a paramount role. The goal of DI is to ensure that all students learning in the same classroom have equitable access to educational opportunities and resources that meet their needs. Hence, instructors are expected to provide instruction that satisfies the needs and interests of each student in the classroom regardless of their differences.

Students’ academic needs are more readily met in a classroom where instructors utilize the differentiated instruction approach (Tomlinson, 2004). Instructors face increased pressure to ensure that every learner demonstrates high academic achievement commensurate with their respective talents. To be successful in providing all learners a fair, equal and significant opportunity to obtain a high-quality education, instructors should employ differentiating instruction. Using it gives students meaningful and quality instruction. In this regard, Johnson (2003) once argued that instructors have a responsibility to make institutions a place where every student can benefit to the fullest potentiality. Instructors are instrumental in helping students to reach their heights and maximum students’ potentialities in learning. Thus, nowadays instructors encounter unprecedented pressure to raise learning standards while meeting the needs of all learners in the diverse classroom.

Instructors need to prepare students for the future by utilizing effective instructional alternatives for teaching an academically diverse population. That is, they should be sensitive to the needs of students, accommodate their different learning styles and find ways to help them make connections for learning to occur in the best possible way. Instructors are continually challenged to implement modifications to their lessons within the classroom to provide
students with positive, interesting, challenging, collaborative and supportive learning environments to ensure that each and every individual student’s academic needs are met. Instructors need to assist in creating instructional environments that will maximize the learning opportunities and will help students in developing the knowledge and skills necessary for achieving positive learning outcomes. Beecher and Sweeney (2008) assert that the focus of education should be about helping each and every learner experience significant progress in fulfilling his/her learning potential. Such learning potential can be realized through DI for it allows instructors to tailor the curriculum to meet the needs of each individual student. Instructors have the responsibility for initiating and implementing hence has to take an active role to maintain the integrity of the differentiated instructional approach. Instructors’ attitude is pivotal in determining the effective implementation of DI for success to be experienced. However, it is not known to what degree instructors are positive in implementing the DI approach. Thus, the study aimed at investigating the teachers’ knowledge, attitude towards DI and its practice at the College of Education and Behavioral Sciences of Bahir Dar University.

1.1. Statement of the problem

There is immense student diversity in the contemporary classrooms of Universities in Ethiopia (Melesse, 2015) and as a result instructors are faced with a tremendous challenge to plan instruction that focuses on individual student’s academic needs. Despite the adoption of varied instructional approaches in a heterogeneous population, there is a need to tailor classroom instruction to meet the needs of all students. Instructors have the lion's share in the learning success of the students. Having this in mind, instructors need to differentiate their instruction in order to give each and every learner equal and appropriate education. Differentiated instruction enables students to learn by making adaptations to key learning variables, which further help instructors meet the needs of all students.

Growing numbers of diverse students are currently being allowed to join into Higher Learning Institutions (hereafter HLIs), which initiate instructors to be charged with levels of academic diversity that have been unheard of until recently (Melesse, 2015; VanSciver, 2005). Similarly, Melesse (2015) claims that in response to the increasingly complex society and a rapidly changing technology-based economy, HLIs are being asked to educate the most diverse student body in our history to the highest academic standards than ever before. As is evidenced across the literature, the “one-size-fits-all” approach to teaching no longer meets the diverse needs of today’s learners (Melesse, 2015). In contrast, DI benefits all students by focusing on essential skills and ideas in content areas, responding to individual learner variance, and integrating assessment with instruction (Gregory & Chapman, 2007; Heacox, 2002; Tomlinson, 2004; Tomlinson & McTighe, 2006). Within the approach, all learners profit from a variety of instructional methods and scaffolds combined with an appropriate balance of challenging instruction and successful learning opportunities (Lawrence-Brown, 2004; Melesse, 2018). Moreover, the environment in a differentiated classroom is one of high regard for students’ diverse abilities (Pettig, 2000; Tobin, 2008; Tomlinson, 2004). Differentiated instruction as a framework has the capability of assisting HLIs in providing all learners with maximum opportunity to fully succeed in school.

Although differentiated instruction is widely recommended (e.g., Melesse, 2018; Rock, Ellis, Greg & Gable, 2008; Lawrence-Brown, 2004), implementing the approach is complex and not without difficulty (Melesse, 2018). Some literature (e.g., Melesse, 2018; Tomlinson, 2004) reports the challenges instructors have encountered when using differentiated instruction. In support of this point, informal discussions held with some instructors and the researcher’s long years of teaching experience at the Universities affirmed that adopting a differentiated instructional approach in the University environment seems limited. Hence, this study explored instructors’ knowledge, attitude and practice of differentiated instructional approach in teaching and learning process in the College of Education and Behavioral Sciences of Bahir Dar University. Hence, the study aims to answer the following basic research questions:
• How far the instructors’ are knowledgeable about in differentiated instructional approaches?
• What is the attitude of instructors towards using differentiated instruction in their respective classrooms?
• How far do College of Education and Behavioral Sciences instructors practice differentiated instruction in their respective classrooms?

2. Objectives of the study
The main objective of this study was to assess instructors’ knowledge, attitude, and practice of differentiated instruction in the case of the College of Education and Behavioral Sciences of Bahir Dar University. More specifically, the study aims to:
• Investigate instructors’ knowledge of differentiated instruction.
• Examine the attitude of instructors towards practicing of differentiated instruction in their respective classrooms.
• Assess instructors’ perceived practice of differentiated instruction in their teaching.

3. The significance of the study
Studying instructors’ knowledge, attitude, and practice of differentiated instruction is very important in effecting changes in the process of learning and its regular application by classroom instructors. It can also create a clear picture of the realities and challenges of teaching in HLIs. Hence, the findings of this study would have the following significances:
• Can serve as a guide in the formulation of instructor’s concern based training programs.
• Can help to identify the requirements for the instructors' concerns based training in line with differentiated instruction.
• Can help curriculum designers to prepare a curriculum that incorporates elements of differentiated instruction.
• Can serve as a starting point for a large scale further study by other researchers in the area.

4. Delimitation of the study
This study was geographically delimited to instructors teaching in the College of Education and Behavioral Sciences of Bahir Dar University, Ethiopia. It is also conceptually delimited to the investigation of instructors’ knowledge, attitude and practice of differentiated instruction.

5. The rationale of the study
Increasing student failure rates signal the need for changing how we teach and how students learn in HLI classrooms (Melesse, 2015). Providing high-quality instruction aligned to student needs is essential for improving instructional effectiveness for student populations with increasing diversity (Melesse, 2015; Wan, 2017). Adjusting routines for teaching and practicing DI is often met with resistance because in-depth professional development has not been provided (Tomlinson, 2014). While many available resources describe characteristics of differentiating instruction, fewer resources assist with practical suggestions for making it happen in the current classrooms (Marzano, 2003; Melesse, 2018; Tomlinson, 2004).

Including students of disparate abilities and interests also requires instructors to rethink expectations for all students by applying differentiated instruction. Instructors take the lion’s share of the determinant factors in terms of linking differentiation and effectiveness. Yet, adopting differentiation in everyday practice is not an easy task. Instructors who have been struggling to differentiate their instruction face many challenges and have to deal with many obstacles and barriers. While difficulties reported by instructors often focus on various institutional restrictions (such as time, lack of resources, heavy loaded curricula and what have you), the major challenge
for the effective application of differentiation may be rooted in instructors’ mentality (Dagnew, 2017; Wu, Wan, & Wong, 2015).

Applying DI requires instructors to have clear knowledge, positive attitude, and commitment. In addition, as far as students’ diversity is concerned it is impossible to satisfy the needs and interests of each student with the traditional role of instructors (MoE, 2008). Instruction in HLI is all over the Globe is dominated by the rhetoric that one-size-fits-all pedagogical method, which poorly serves a diverse student body (Ernst & Ernst, 2005; Melesse, 2018). Rather than using learner-centered approaches, the current practice of higher education instructors is often supportive of keeping traditional ideals and the one-size-fits-all approach to teaching in the Ethiopian education system (MoE, 2008). The presence of a high percentage of college students repeating an academic course is an indication that traditional methods cause a mismatch between instruction and students' academic needs (Dosch & Zidon, 2014).

Hence, having a clear understanding of the implementation of DI is essential for instructors to respond to the diverse needs of students. Besides, the researcher in his long years of teaching experience in HLI has observed that most instructors including me are becoming highly dependent on powerpoint presentations and lecture method of teaching. Such traditions of using instructor-centered methods cannot satisfy the growing demand for diversified needs of students (Melesse, 2018, 2015). As a result, the need to study the knowledge, attitude, and practice of instructors for the effective implementation of DI is timely and important.

6. The approach of the study
The approach used in this study was a qualitative research approach which allows having a detailed understanding of the issue under investigation (Patton, 2002). The issue requires an in-depth and 360-degree treatment of instructors’ knowledge, attitude and practice of DI.

7. Design of the study
The study employed one of the designs in qualitative research approach (i.e., case study) since it aimed to investigate the knowledge, attitude, and practice of instructors in the case of the College of Education and Behavioral Sciences of Bahir Dar University. Hence, the case study design is used in order to investigate the knowledge, attitude, and practice of differentiated instruction as it is a specific instance that is frequently designed to illustrate a more general principle (Miles, Huberman, & Saldana, 2015).

8. The population of the study
The sources of data for this study were college instructors, department heads and the dean of the College of Education and Behavioral Sciences of Bahir Dar University.

9. Sample and sampling techniques
The participants of the study were instructors in the College of Education and Behavioral Sciences of Bahir Dar University. There were five departments in the College of Education and Behavioral Sciences. They were Teacher Education and Curriculum Studies, Psychology, Educational Planning and Management, Special Needs and Inclusive Education, and Adult Education and Community Development. In these departments, there were 92 instructors (55 male and 37 female). Of whom, 38 had Ph.D and the rest 54 had a Master's Degree.

Among these instructors, 30 instructors (18 male and 12 female) were purposively selected as participants of the study. These 30 instructors were selected because 20 of them had many years of experiences in teaching and were ideal to get relevant information about the issue under investigation. The other 10 were selected since they had the experience of other countries as they had pursued their post-graduate education outside Ethiopia. The dean and the department heads were also purposively included as participants of the study as they had the role of supervising and monitoring the teaching and learning process and as a result they had direct interaction
with instructors in the respective departments in the process of instruction, and they are also conducting instruction in some courses of their respective disciplines.

**9.1. Instruments of data collection**
In order to get first-hand information and relevant data for the study among the study participants, interview and focus group discussion were used as the major data collection tools.

**9.2. Interview**
In order to get first-hand information and relevant data for the study from a few numbers of the participants, the interview is said to be more suitable (Miles et al., 2015). Hence, semi-structured interview representing the basic questions of the study were used to collect data from the dean and the department heads. Before starting the interview, the respondents were informed about the purpose of the study. During the interview, all the responses were taken using handwritten notes and tape recorders. Finally, the responses of the interviewees were transcribed, analyzed and incorporated in the final report.

**9.3. Focus group discussion**
The purpose of the FGD was to either supplement or complement the evidences that were secured via the semi-structured interview. A group that comprises of six members and a total of five FGD groups (i.e., one FGD from each department) took part in the focus group discussion. There were a long interval and democratic discussion among the discussants. The items of the FGD were directly related to instructors' knowledge, attitude and practice of DI. The discussion was followed by probing questions as well.

Additional comments were also given by the group members after they heard the questions posed by the researcher and the responses of others. The responses were collected by writing notes and recorded through a handy tape recorder. All the FGDs were held in comfortable rooms and calm situations so that there was little interruption encountered during the data collection process. Finally, the discussions were transcribed, described, analyzed and incorporated into the final report.

**9.4. Method of data analysis**
The data from the semi-structured interview and focus group discussion were transcribed, categorized and described in a qualitative approach using narration and explanation by categorizing the data into data driven themes that directly fit with the basic research questions of this study (Miles et al., 2015).

**10. Analysis and discussion of the findings**
The data obtained through semi-structured interview and focus group discussion (FGD) were treated under three major parts. The direct quotes presented herewith are representatives of the interview and FGD.

- Teachers’ knowledge about DI,
- Teachers’ attitude towards using DI in their respective classes, and
- The practice of DI in the selected study area.

The dean of the college was asked the knowledge of instructors about DI. The dean replied that:

*As to me, the College has reached a consensus to provide DI instruction according to the students’ level of understanding and instructors are not strange for this. But, I did not see such practice among instructors because most of them are usually using LSDs and power point presentations.*
From the above response of the dean, it is possible to deduce that the dean and the instructors had the knowledge about the concept of DI. Supporting this point, Levy (2008) explained that differentiated instruction is not new as instructors have the knowledge of differentiated instruction to some extent since teaching began. But, their practical application in the classroom is highly doubted. As it is much known, instructors’ knowledge about the concept of DI is very crucial and be used as an input for its implementation or practice. But, knowledge alone does not make sense unless it is supported by practice. As it is stated in some literature, instructors had higher responsibility in practicing DI in their classrooms. In relation to this, Tomlinson (2014) suggested that differentiated instruction obliges that an instructor employs reasonably different approaches to learning at a time. In addition, the role of instructors in a differentiated instruction class is to make sure that each and every student is mastering the instructional goals to his/her fullest potentiality. The instructors have a plan for each student to follow. The instructors’ job is to make sure that they are assisting the students with different options to try different ways of learning that satisfy different learning styles (Melesse, 2018, 2015).

A differentiated instruction instructor provides strategies for students that are already personal goal oriented. Differentiated instructors usually allow their students multiple times of trying, before they will join in and offer solutions to a problem. In sum, though instructors have knowledge about DI, their practical application is not as expected.

The department heads had also supported the idea of the dean in that instructors are not as such strange about the concept of DI. But, the application in the actual classroom is difficult due to different reasons. In relation to the concept instructors have about DI, one of the department heads replied that DI is helping students depending on their diverse needs which allow instructors to be diversity responsive. What instructors are not very clear is the how of differentiation.

From the above response of one of the department heads, it is possible to understand that instructors were not strange about the concept of DI, but they had limited concept about the ways and means of differentiation. The researcher’s repeated classroom observations as Higher Diploma Program leader/tutor, long years of experience as a department head of Teacher Education and Curriculum Studies department and vice dean of the College of Education and Behavioral Sciences confirmed that most instructors had little understanding about the different approaches of DI implementation.

The instructors in the FGD suggest that they had certain know-how about DI. But, as they were mainly focusing on traditional lecturing they were not practicing it in their classroom regularly by early planning and preparation. In relation to this point, one of the discussants said that: I am not clearly stating my course objectives and plan with respect to the principles of DI ahead of time except providing some assignments and group work as usual for my students to fulfill course requirements laid out by the College in particular and the University in general.

This response of the discussant indicates that instructors’ specific knowledge about DI is not as expected. Because their response indicates that they had a low understanding of the concept of DI. In principle, applying DI requires instructors to have clear knowledge, positive attitude, and commitment. In addition, as far as students’ diversity is concerned it is impossible to satisfy the needs and interests of each and every student with the traditional role of the instructor. Instruction in higher education is dominated by a one-size-fits-all pedagogical method, which poorly serves a diverse student body (Ernst & Ernst, 2005; Melesse, 2018). Therefore, providing instructors with the necessary knowledge and skills about DI is a very important activity in the practice of DI in the actual teaching-learning process.

During the interview about the instructors’ knowledge of DI, the researcher learned that instructors had certain know-how about it. But, this knowledge is limited to general knowledge related issues. That is, content, methodology, objective, and assessment differentiations were not as such clear. This is due to the fact that most instructors state objectives and identify contents randomly.
and they provide similar tests, assignments, and examinations for the sake of completion of the
requirements of the respective course without being adhered to the principles of differentiation.
Hence, instructors need further specific knowledge about DI in order to apply it appropriately.

Another FGD participant added that: *My knowledge about DI is not as is suggested in the
principles of DI. To me, DI is very complicated which is difficult to apply it in the actual classroom
context with the current knowledge which I feel I have.*

In this case, the discussant’s response indicates that the actual classroom instructors’ context is
below the expected as far as their knowledge for DI is concerned. In relation to this point,
Tomlinson (2004) asserted that the institutional environment will support or deter the student’s
quest for affirmation, contribution, power, purpose, and challenge in the classroom. The learning
environment includes the physical layout of the classroom, the way that the instructor uses the
space, environmental elements and sensitivities including lighting, as well as the overall atmo-
sphere of the classroom. The instructor’s goal is to create an environment that is positive,
structured, and supportive of each student. The physical environment should be a place that is
flexible with varied types of furniture and arrangements, and areas for quiet individual work as well
as areas for group work and collaboration. This supports a variety of ways to engage in flexible and
dynamic learning. Instructors should be sensitive and alert to ways that the classroom environ-
ment supports students’ ability to interact with others individually, in small groups, and as a whole
class. This demands to have clear conceptual knowledge about DI in order to apply it
appropriately.

In sum, instructors’ knowledge and understanding about the concept of DI is a very important in
put to be exhibited in the actual teaching-learning process by instructors. As to the instructors’
attitude towards DI, all the participants (those participating in the interview and focus group
discussion) replied that they had a positive attitude towards it. In relation to this point, one of
the interviewees forwarded that:

*I am highly interested in the issues and objectives of differentiated instruction as it allows
instructors to know and understand each and every student. It also enables instructors to be
diversity responsive and it is when we have a positive attitude towards DI that will be easier to
apply it.*

From the above response of the interviewee, it is possible to infer that application of a certain
program or teaching method requires a positive attitude and commitment on the side of the
practitioners where DI is one. Supporting this point, Anderson (2004) stated that whatever is done
in terms of distributing new material or developing new curriculum, educational effectiveness
depends on instructors’ attitude and their ways of teaching and handling classes. In addition,
the positive attitudes and actions employed by instructors ultimately bring a positive difference in
the lives of their students. There is some talent or potential in every student, and instructors’
attitude can put lasting impressions in each and every student’s struggle to flourish to his/her
maximum potentiality. Most experienced instructors usually care, like, accept, and value their
students. Hence, these instructors will demonstrate kindness, share responsibility, accept diversity,
foster individual instruction, and encourage creativity. Students deserve the opportunity to have an
instructor who will be waiting at the end of each student road, block or challenge with a smile. In
the same vein, it will be that optimistic instructor attitude will encourage the student to continue
toward successful achievement. No matter how good developed a curriculum is and the extent of
back up resource supplied, no matter how much incentive is applied through the accountability of
a national assessment scheme, no matter how much politicians exhort, unless instructors are with
a good enthusiasm for the subject and methods with their students, teaching will never become
better than adequate (Dagnew, 2017). This explanation indicates that having a positive attitude
towards DI is very important for its effective implementation. Hence, developing a positive attitude
towards DI will be essential for its implementation which could enable instructors to facilitate each and every student’s learning.

The dean of the college further replied about instructors’ attitude towards DI as follows: Most instructors' attitude towards DI is good. They show some kind of interest when we discuss the teaching-learning process. But, they mostly practice lecturing, adhere to power point presentations and rarely use group discussion method in their teaching.

From the above responses, one can conclude that instructors have a positive attitude towards DI but their actual practice is not as expected. Developing a positive attitude towards DI is very essential and timely in order to facilitate each and every student’s learning and be responsive to the diverse needs of the students.

Supporting this point, Gregory and Chapman (2007) explained that differentiated instruction assists instructors in planning strategically in order to meet the diverse needs of learners in today’s classrooms to achieve specific standards. Rather than a set of tools, differentiation is a belief system which instructors embrace in order to meet the special needs of every student in the classroom.

Practicing DI is very important in order to satisfy the diverse needs of the students. In relation to the actual practice of DI in the College, one of the department heads replied that: Of course most instructors try to differentiate instruction but it is difficult to say that it is properly practiced based on the principles of differentiation. Because most instructors prepare course plan by defining objectives and select contents based on the objectives. But, objectives are not prepared in a differentiated manner as most of the objectives are focusing on the lower cognitive domain giving less emphasis to the affective and psychomotor domains and higher order behavioral changes.

From the above response of the department head, it is possible to deduce that even though instructors prepare their course plan by defining objectives, the objectives stated are not differentiated since they are focusing on lower cognitive domain behaviors. Since students have diverse needs and capabilities, the three domains of Bloom’s taxonomy of educational objectives need to be included in defining the objectives. This shows that though contents are differentiated, the objectives defined are not differentiated. Hence, the practice of DI is very poor.

The participants of the FGD also explained that the practice of DI in their college is low. In relation to this point, one of the discussants suggested that:

The practice of DI is said to be very poor in the college because most of us use the traditional mode of instruction. Of course, we differentiate contents and methods to some extent but we provide a similar test, assignment, and examination for all students of the classroom. As we know, in a DI it is not only the contents and methods that should be differentiated but also the assessment techniques too.

From the above suggestion, it is possible to say that assessment which is one of the most important elements of differentiation is not properly practiced which in turn indicates that DI is not fully practiced. In relation to assessment in DI, Strenberg and Zhang (2005) suggested that when teaching with the philosophy of DI is applied, assessments are used throughout the implementation of DI and are the driving force which reminds instructors to pre-assess students and provide formative assessments throughout the learning process. This type of assessment is different from the typical form of assessment known as summative assessment (testing a child after each chapter or skill taught) in that it informs instructors on how to continue teaching that fit to the different needs of each and every learner. That is, it is important to keep in mind students different learning styles because for students to benefit most from instruction and assessment, part of the instruction and assessment should match their learning style.
As to the opportunities to practice DI in the college, one of the discussant suggested that: Some of the classrooms are with fixed desks which are difficult to move from place to place within the classroom and others are with a smart board where applying DI is very difficult. This, in turn, makes it difficult to move students from one side of the classroom to the other.

From the above explanation, it is possible to understand that the actual context of the classroom arrangement is not suitable to apply or practice DI. In relation to the learning environment, Tomlinson (2004) purported that the environment will support or deter the student’s quest for affirmation, contribution, power, purpose, and challenge in the classroom. The learning environment includes the physical layout of the classroom, the way that the teacher uses the space, environmental elements and sensitivities including lighting, as well as the overall atmosphere of the classroom. The instructor’s goal is to create an environment that is positive, structured, and supportive of each student. The physical environment should be a place that is a flexible with varied types of furniture and arrangements, and areas for quiet individual work as well as areas for group work and collaboration. This supports a variety of ways to engage in a flexible and dynamic learning. Instructors should be sensitive and alert to ways that the classroom environment supports students’ ability to interact with others individually, in small groups, and as a whole class.

Besides the problem of classroom arrangement, the participants listed several factors which challenge them in the implementation of DI. Some of the factors are lack of commitment among all the concerned ones, lack of training about the implementation of DI, students’ lack of readiness and motivation to their learning, large class size and the like.

In order to alleviate the challenges, the participants suggested that the classroom arrangement should be suitable, the number of students in a class should be reduced and instructors should be given training on the implementation of DI.

11. Conclusions
Based on the results, the following conclusions were made:

- Instructors had a positive attitude towards DI. Data sources also noted that it was of importance to implement differentiated instruction within their respective classrooms because this approach is necessary to address the diverse needs of learners.
- Instructors had limited specific knowledge of the theories, models, and principles of using DI in the current diverse classrooms.
- The prevailing practice of the elements of DI was poor. Thus, it is difficult to say that the elements of DI are fully practiced in the college. The culture of using the lecture method frequently and assessing students based on final examinations, assignments, and quizzes as mere modes of teaching and assessment were emphasized. This implies that instructors failed to use DI to raise each and every student’s engagement in the learning process. Moreover, the various continuous assessment techniques were not fully practiced in the college as per the principles of DI.
- The findings also confirmed that many factors affect the implementation of DI in the college. These include large class size, heavy workload, a shortage of time, instructors’ lack of commitment, poor coordination, lack of support at different levels, and pupils’ reluctance to express their ideas in front of their friends.

12. Recommendations
In light of the conclusions made, the researcher forwarded the following recommendations:

- The current mode of teaching which focused on the traditional lecture method should be minimized. It should place emphasis on increasing each and every student’s engagement in the teaching-learning process, i.e., encouraging each and every student to involve in the
learning process which will facilitate the practice of DI and thereby satisfy students’ learning needs of varied nature.

- The actual context of the college (inadequate resources to the implementation of DI) and its obstruction of the implementation of DI should be deliberated at length among practitioners and thereby avoiding its negative effect in the implementation of DI.
- Differentiated instruction is an effective instructional strategy to meet the needs of all students and should be a priority area in Colleges and Universities during instructional delivery.
- Instructors need to be advised and encouraged to exhibit appropriate adaptations to diversities in the classroom when implementing courses by using differentiated instruction.
- Instructors need to be provided with support, information, and suggestions related to the effective implementation of differentiated instruction.
- Conducting further research in the area of instructors’ knowledge, attitude and practice of DI at a large scale is commendable.

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