Differentiated Instruction Based on Formative Assessment in Associate Degree in Education Program

Salima Begum[*]
Munnaza Ambreen[**]

Abstract

This paper highlights the processes of differentiated instructions based on formative assessment data that an instructor of Associate Degree in Education Program (ADE) applied in classroom at College of Education for Women, Pakistan. The study was conducted in qualitative paradigm and used case study approach to understand the use of formative assessment evidence to alter instructional design. Research participants of this study were an instructor teaching to ADE program and eight ADE students. Researcher applied four data collection methods that included document analysis, semi-structure interview, observation and focused group discussion. Researcher video recorded 46 classroom observations, conducted four interviews with instructor and two focused group discussions with students. Researcher triangulated data through methodological triangulation to ensure the validity and reliability of this case study. To analyze data researcher used thematic analysis approach. The collected data from different sources indicated that use of differentiated instruction is fundamental to improve students learning. Furthermore, the study indicated that instructor differentiated the instructions by content, process and product differentiation while implementing different formative assessment strategies. The study revealed that matching instructional design with learning style of learners to improve their learning in classroom significantly support students; learning as per their learning needs.

Keywords: Formative assessment, differentiated instructions, content differentiation, process differentiation, product differentiation.

Introduction

This paper highlights the processes of differentiated instructions as a result of formative assessment data and evidence that an instructor of Associate Degree in Education Program (ADE) applied in classroom at College of Education for Women, Pakistan. Differentiated instruction and formative assessment are interconnected where teachers recognize and classify students' diverse learning needs and address these needs

[*]Education Officer, A-18, Noorabad Colony, Block 14, Gulshan-e- Iqbal Colony Karachi, Email: salimababar2004@gmail.com
[**]Assistant Professor STED, Faculty of Education, AIOU, Islamabad. Email: munazza.ambreen@aiou.edu.pk

by applying differentiated instruction approach. Differentiated instructions consider three important aspects during teaching learning process. First one is content differentiation that deal with what is taught to the students should be persistent to all students but the level of complexity of that selected content should be varying to address the diverse need of students by considering students learning profiles, interest and willingness level. Secondly, differentiation by processes can be addressed by teachers through devising and modifying activities, considering student intellectual, readiness and interest level. Thirdly, Product differentiation providing opportunities for the learners to share their learning by using numerous strategies linked with their learning styles. The findings of the study provide variety of strategies and approaches for teachers to address students' needs in content, process and product to minimize learning gaps and enable students to perform betters.

Background of the Study

Formative assessment is believed to be an active process of students' involvement in teaching and learning processes which need to be practiced during the academic year. The requirement of assessment emerges from the strong relationship between teaching strategies, learning strategies and learning processes. Teaching and learning strategies are interwoven and cannot be separated because the aim of teaching is to improve students learning by differentiated instruction which is identified and understood through formative assessment data. Teachers' instruction does not always guide to achieve students intended learning, therefore, formative assessment through differentiated instruction is the only strategy that provides evidence of students' learning outcomes. The dilemma for classroom teachers is that, students learning cannot be improved only through preparation for annual assessment; hence, a range of assessment approaches is mandatory. Analysis of formative assessment data enables teachers to design instructional activities that are critical to address students with different learning abilities. Hence assessments are fundamental for differentiated instruction and engage students as per their interest, motivation for learning and abilities.

Statement of the Problem

Formative assessment is an integral part of teaching process that guide teachers and students both to reflect on their learning and plan to address gaps in future practice. Thus, formative assessment is core of teaching and learning process whereas assessment treated as a separate activity to be conducted after an interval. In a true sense, assessment is not only promoting students to higher classes based on time bounded paper-pencil test, it is more than testing knowledge. It is also identifying students learning needs and plan accordingly to address those needs. Five fundamental questions should be thought of by teachers: What needs to be assessed in the classroom, why to assess or what is the need of students' assessment, what kind of strategies need

to be used to assess students learning or how to assess, how to interpret the acquired data during assessment to make appropriate decisions about their learning needs through differentiated instructions and how to respond or plan to address student learning needs is very important before implementing any assessment strategy by teachers. A differentiated instruction through formative assessment strategies is very important to address students learning needs and improve their learning outcomes in classroom.

Objectives of the Study
- The objective of this study was to highlight formative assessment processes and procedures (data collection and recording, analysis, categorization and decision making) that instructor of Associate Degree in Education Program applied to differentiate and adjust her instructions based on learners need.
- Investigate the steps, processes and procedures that instructor used in order to differentiate instructions, make decisions about selection and/or modification of formative assessment strategies to improve instruction.
- The study also intended to explore whether use of formative assessment helped instructor to adjust instructions considering students learning needs in classroom based on formative assessment strategies and data.

Research Questions
How and why instructors in ADE program use formative assessment strategies to differentiate and adjust instructional techniques in classroom?

Subsidiary Questions
- What are the current practices of formative assessment and differentiated instruction and why instructors use these practices?
- How instructor use formative assessment information to differentiate and adjust instructions to address students' learning needs?

Literature Review
The essential purpose of formative assessment is to recognize the gaps in learners learning, what is the learning stage of learners and what should be their learning targets and strategy to get there. Formative assessment strategy is considered as gap reminder because it helps teachers to be careful about students learning loss that lead to differentiate learning and instructions before moving on to next lessons (García & Lang, 2018; Ogange et al., 2018; Janssen & Rowen, 2016).

The purpose of formative assessment is to support learners in their learning processes that is also called 'assessment for learning'. These learning processes are collaborative between teachers and students where they set goals, plan and implement activities together to address learning gaps. By analyzing this information, teachers

modify their instructions and students adapt their learning (Gloria et al., 2018; Guadu & Boersma, 2018; Grob et al., 2017). While implementing different strategies of formative assessment such as round robin, inside outside circle, one-minute essay, classroom discussions, pair work, one-minute fluency, thumbs up thumbs down two-minute reflection, teachers can explore and collect learning evidences. Using this data evidence, teachers can differentiate students' learning and adjust instructions (Gloria et al., 2018; Guadu & Boersma, 2018; Andrews et al., 2018).

The main goal of implementing formative assessment strategies is to differentiate students' learning requirements and adjust instructions. While differentiating instructions teachers can use diverse instructional methods to address diverse learning needs of students in the classroom. In this process teachers need to be concerned about students' confidence, knowledge, skills and capability to achieve the goal of their learning. Anthropologist, social and cognitive psychologist and other social scientist have acknowledged and identified that children prior learning experiences, knowledge and skills are strongly contributed to shape their new knowledge (Bonham, 2018; Sadler & Reimann, 2018; Christodoulou, 2017).

Learners have varied social and cultural knowledge, learning preferences, motivations, skills and intellectual capacities that they bring to classrooms. This variance is a huge challenge for teachers within the classroom to address their individual learning needs. Due to their diverse learning need some learners might find lesson very simple and easy while some find it very complex and difficult to comprehend the concept. Similarly, some learners may find the theme appealing while some find it boring. In this situation differentiated instruction is the only strategy to fulfill the needs of each student and plan strategies in the lesson using a technique that addresses students' interests, capabilities and aptitudes, learning styles or multiple intelligences (Whitaker & Valtierra, 2018; Dack, 2018).

Differentiated instruction is backed by different learning theories including, constructivist theory, multiple intelligences and brain-based research (Lockley et al., 2017; Romanov, 2017; Dijkstra et al., 2017; Lang, 2017; Pablico, 2017). Differentiated learning emphasizes to identify learners unique learning requirements to regulate thoughtful instructional and assessment strategies to meet the learning needs by differentiating course material, procedure and assessment strategies and learning evidences considering learners willingness, preparedness, curiosity, attention and learning style (Tomlinson, 2017; Boelens et al., 2018). In differentiated instructions teachers are making small groups to address the learning needs of students effectively. Teachers can set individual targets for each student based on student's strengths and weaknesses by assessing students periodically and then evaluating these assessments strategies (Faber et al., 2018; Zola, 2017; Pablico, 2017; Gaitas & Martins, 2016; Tomlinson, 1999; Chen & Chen, 2018; Tomlinson, 2015). Tomlinson (2017) and Wan

(2016) suggested six key elements of differentiated instructions as content, process, product, students learning profile, students readiness and interest and learning environment.

In content differentiation what is taught to the students should be relatively constant to all students in the classroom but the level of complexity of that selected content should be varying to address the diverse need of students by considering students learning profiles, interest and willingness level (Whitaker & Valtierra, 2018; Connor et al., 2018; Dack, 2018; Zola, 2017; Pablico, 2017; Tomlinson, 2017).

Differentiation by processes can be addressed by teachers through devising and modifying activities, considering student intellectual, readiness and interest level, taking Bloom's Taxonomy of learning domains into consideration which reinforce students critical thinking and problem-solving skills (Ramos, 2018; Colquitt et al., 2017; Cannon, 2017; Tomlinson, 2017; Wan, 2016).

Product differentiation providing opportunities for the learners to share their learning by using numerous strategies linked with their learning styles. Through these strategies students can improve their learning, cognitive presentation and expressions abilities by critically reflecting on the processes and their learning (Whitaker & Valtierra, 2018; Connor et al., 2018; Tomlinson, 2017; Romanov, 2017; Strunk & Willis, 2017; Wan, 2016).

Research studies and educational theories suggested that teachers need to adjust teaching/learning and curriculum considering students learning profile, interest and readiness level, curiosity attention, and participation so that learners' will feel ownership and take responsibility and accountability of their learning (Tomlinson, 2017; Chen & Chen, 2018; Dack, 2018; Fuad et al., 2017).

Methodology

This study was conducted in qualitative paradigm because "qualitative research is exploratory, descriptive or explanatory, that assumes the value of context and setting, and that searches for deeper understanding of the participants' lived experiences of the phenomenon" (Marshall & Rossman, 1995, p.39). In qualitative paradigm researcher used case study approach to investigate the practices of differentiated instructions while implementing formative assessment strategies in ADE courses (Gillham, 2000; Yin, 1994). The rationale of using case study approach was to provide researcher a platform to investigate and identify the processes of differentiated instructions based on formative assessment data (Bell, 1999). Research participants of this study were an instructor of College of Education for Women in Pakistan teaching to ADE program and eight ADE students to explore and validate the practices of differentiated instructions while applying formative assessment strategies in classroom.

Furthermore, researcher applied four data collection methods such as document analysis, semi-structured interviews, classroom observations, and focused group discussion because "qualitative research is multi methodological in its focus, involving an interpretative, naturalistic approach to its subject matter" (Gall et al., 1996, p.28). The data collection process was carried out in natural setting and researcher applied document analysis as base method for this study (Hitchcock & Hughes, 1995; Guba & Lincoln, 1985; Creswell, 2003; Maxwell, 1996). In document analysis researcher analyzed course guide developed to teach ADE courses, instructor's lesson plans and assessment sheets to see the connection between stated views, classroom practices and planning about differentiated instructions and formative assessment. Researcher also conducted four interviews with instructor to know about her understanding of formative assessment practices and differentiated instructions. Furthermore, researcher recorded 46 classroom observations to witness practices of differentiated instructions while implementing formative assessment strategies and improvement in students learning. Researcher conducted two focus group discussions with eight ADE students to explore the practices of differentiated instructions during execution of formative assessment strategies and how it contributed to improve their learning. Additionally, researcher used guided interview questions, audio recorder, video camera and document analysis checklist as data collection tools during this study. Furthermore, to ensure validity and reliability of this case study researcher used two data collection principles such as 'maintain a chain of evidences' and 'use multiple sources of evidences' during data collection process (Yin, 1994).

Researcher used thematic analysis approach to analyze data because qualitative approach enabled researcher to develop themes from data collected through multiple methods (Vaismoradi et al., 2016). Researcher followed research ethics while collecting data by sharing informed consent letters to ensure confidentiality and security of research data (Yin, 1994; Creswell, 1998; Maxwell, 1996).

Findings

Instructor greatly emphasized on addressing learning needs of students that were identified and categorized based on formative assessment data in this study. Formative assessment data led the instructor to connect the dots that what need to be changed and improved and how this change affect students learning. The study identified that students in the classroom have different learning needs, interest and abilities. Instructor used variety of instructional and formative assessment strategies to address multiple students' learning requirements. Differentiating instruction was design with the realization that various approaches representing information helps not only learners with learning difficulties but can also increase learning of students without difficulties.

Formative assessment has great influence on instructional design in this study because instructor adjusted her teaching approaches according to learning pace and level of learning of students. It was not instructor who decided about instructional activities rather students' learning that guided instructor to continue the strategy or change it. The information about students learning is acquired through formative assessment practices that explain the effectiveness of instructional activities in the classroom in term of content, process and product differentiation. It assisted instructor to make decisions about next lessons whether to continue whole or part of instructional design to enforce students' learning and create an environment where students develop concrete understanding of concept taught in the lesson. Instructor differentiates instruction by content differentiation where instructor used the same content with different level of complexity. Instructor also used process differentiation where instructor applied multiple instructional strategies to facilitate students according to their learning style and pace. Instructor also applied product differentiation where she provided multiple opportunities for the students to present their learning as per their learning style.

Instructor simplified complex concepts for students and assisted students to assimilate new ideas. In doing so formative assessment played critical roles by identifying students who need additional support or have difficulty in understanding the concepts. Instructors identified and understand learners' learning needs and style and adapt instructional techniques to facilitate students as per their learning styles and needs to improve learning in the classroom.

Discussion

The collected data from different sources indicated that use of differentiated instructions is fundamental to improve students learning. Teachers used differentiated instruction by devising and executing various formative assessment and instructional activities in classroom. Research participant always considered students diverse learning needs and interest in classroom and modified her instructional techniques accordingly. Research participant was differentiating content, process and product while planning and implementing different instructional and formative assessment strategies in classroom. As research participant explained, "in classroom students having different learning levels and learning needs. It is very important to identify their learning differences and address their learning needs by differentiating instructions. In differentiated instructions I am differentiating content, process and product in the classroom. I am addressing these three areas through planning different activities and using different instructional and assessment strategies" (Interview, 05-12-2018). FGDs also confirmed this aspect, "based on our learning needs teacher is altering instructional and formative assessment strategies. Teacher is creating multiple opportunities for us to improve our learning" (FDGs, 15-10-2018). Classroom observations also indicated that

research participant devised and executed various formative assessment and instructional activities in classroom. The classroom observations showed that research participant always considered students diverse learning needs and interest and modified instructional techniques accordingly (Classroom Observations, 10- 09-2018 to 14-12-2018). Document analysis further confirmed that research participant devised multiple formative assessment and instructional techniques to address students' diverse learning needs and interest (Lesson Plans, 10- 09-2018 to 15-12-2018). Sadler and Reimann (2018) stated that, the main objective of formative assessment is differentiating instructions to address the diverse learning needs of students. In differentiated instructions teacher is differentiating processes, content and product as per students' interest, motivation and learning profile. When students are facing difficulty to read and comprehend any concept then teacher need to simplify content as per the level of students to improve their learning. If any student face challenges to express learning, then teacher devises and implement different strategies of formative assessment to provide opportunity for the students to express their learning in the classroom. To achieve these objectives, teachers' competency is very important to facilitate learners as per their learning needs and requirements. All students have their individual learning styles and in differentiated instructions teachers are identifying students' individual learning styles, plan activities based on their learning profile and providing opportunities for learners to learn using the techniques which are natural and effective. Teachers are differentiating instructions by content, process and product differentiation to facilitate students in learning according to their pace and level (Ramos, 2018; Lockley et al., 2017; Romanov, 2017; Tomlinson, 2017; Strunk & Willis, 2017).

Content Differentiation

The research data further discovered that research participant was facilitating students in classroom by content differentiation. Research participant was simplifying content with examples for those learners who were facing difficulty and used same content with different level of complexity according to their learning needs and pace. Research participant facilitated students in different groups and individually according to their learning needs to ensure that all learners and groups are on the same page. Research participant authenticated, "I am differentiating content by simplifying complex and intense content using simple words and synonyms. I am also using simple examples for those students who are slow learners. I am using three types of content with same meaning and gist, for example I am using complex words for fast learners, simplifying complex words for slow learners but the gist of content remained same. I am also using real life examples and simplifying language as per the needs of students" (Interview, 05-12-2018). Classroom observations also discovered that research participant was differentiating content while implementing formative assessment strategies for example, students who could not understand the complex text she simplify and explain the assigned text. Research participant was explaining the selected content

in simple language for students to develop their understanding. She went to every student and explore their difficulties and clarify difficult concepts (Classroom Observations, 10- 09- 2018 to 14-12- 2018). Document analysis also presented the evidences of research participant's efforts to differentiate instructions because she devised different formative assessment and instructional techniques in her daily lesson plans to facilitate students according to their level and interest (Lesson Plans, 10- 09- 2018 to 15-12- 2018). This approach is endorsed by students in FGDs, "teacher is explaining content in simple language to develop our understanding related concept. Teacher is also assigning content in different ways such as simple and complex but we are learning same text with different level of complexity. Students who remained silent teacher is going to them and exploring about their difficulty and supporting them accordingly. We ask critical questions from teacher to clarify our ideas. We are eagerly completing our assignments assigned by teachers because teacher is giving us constructive feedback with alternatives to improve our learning" (FDGs, 15-10-2018). Research participant further said, "while delivering content I am focusing on all groups and individual students but giving more attention and time to those groups and individuals performing low. During explanation I am using 'questioning strategy' and 'show of hand' strategy to know about learners' level of understanding and comprehension. I am ensuring that all learners and groups are on the same page. In addition to that I am also simplifying the level of complexity of content for slow learners. I am giving content of complex words to fast learners group and simple content to slow learners groups with same meaning and gist. The reason of following this strategy is to keep the same learning pace for all groups and learners" (Interview, 25- 09- 2018). Wilson (2017, p. 8) defined "differentiating instruction is changing the pace, level, or kind of instruction you provide in response to individual learners' needs, styles, or interests." In classroom students have diverse learning abilities and all students are learning at different pace. It is the responsibility of teachers' to identify students current level of academic performance and adjust instructions based on their learning pace, interest, level and learning style to enhance their academic success. Formative assessment is enormously valuable tool to recognize students' level of understanding and gapes to provide support based on the acquired information through differentiated instructions. Making complex concepts simple and easy for students is art of teaching and assisting students to assimilate new ideas. In doing so formative assessment play a critical role by identifying students who need additional support or have difficulty in understanding the concepts. The findings revealed that matching instructional design with learning style of learners to improve their learning in classroom significantly support students; learning as per their needs.

Process Differentiation

Research participant was differentiating instructional processes by devising and applying different instructional and formative assessment strategies to facilitate learners

as per their learning style and pace. Research participant was assessing students' learning through formative assessment strategies and plan following lessons according to the identified learning needs of learners. Research participant was also differentiating processes by providing different learning opportunities to the learners to learn and express their learning in classroom. Research participant further indicated, "in process differentiation I am identifying students learning styles and learning needs. Some students can better learning in group work, pair work, trio work and some students are giving effective output individually. I am trying to facilitate students as per their learning styles and learning needs so they will be able to learn successfully. I am involving students in learning in classroom as per their learning needs and I am assigning instructions and assessment strategies according to their learning needs" (Interview, 05-12-2018). Classroom observations identified that research participant was providing multiple opportunities' for students to learn and express their learning. For example she provided chances for students to express their learning through presentation, writing short summaries and reflections and drawing different sketches about concept, poetry and stories (Classroom Observations, 10- 09- 2018 to 14-12-2018). Students also endorsed this practice in FGDs and stated, " teacher is providing us different opportunities to learn and express our learning in classroom such as through presentations, one/three minute summaries, one minute reflections, short essays, gallery walk presentations, drawing, poetry and stories" (FGDs, 19-11-2018). Document analysis also showed that research participant devised multiple strategies in her lesson plans such as triads, one/three minute summaries, presentation, one minute reflections, teach a friend, short essays, gallery walk presentations, drawing, poetry and stories (Lesson Plans, 10-09- 2018 to 15-12-2018). Deneen, et al. (2019) said that formative assessment is one important component in the learning progression of students and it should be an integral part of classroom practices. Teachers' knowledge and understanding about formative assessment is very important to devise and implement different formative assessment strategies effectively in the classroom. Teachers need to have ability to devise formative assessment strategies aligned with instructional strategies considering students interest, learning profile and level. Teachers require having competency of providing constructive feedback. Differentiated learning can interpret these variances by orienting the learners to the content in diverse methods through engagement and inspiration. If a learner is benefiting from differentiated teaching then differentiating assessment aligned with teaching is crucial to achieve the set targets. Meta-analysis of research findings and literature clearly suggested that teachers' knowledge about formative assessment is influencing their formative assessment practices in terms of devising assessment task, effective execution, analysis of formative assessment data, adjusting instructions based on the gathered data. Teachers who are more competent and knowledgeable about formative assessment they are professionally integrate assessment data in to their instructions in order to improve teaching and enhance students learning outcomes.

The data analysis highlighted that formative assessment has great influence on instructional design. Research participant adjusted teaching approaches according to learning pace, level and learning of students. The information about students learning is acquired through formative assessment practices that explain the effectiveness of instructional activities in the classroom in terms of content, process and product. It assisted research participant to make decision about next lessons whether to continue whole or part of instructional design to enforce students' learning and create an environment where students develop concrete understanding of concept taught in the lesson.

Product Differentiation

Research participant provided diverse opportunities for the students to express their learning in classroom. Research participant validated and said, "in product differentiation I am providing opportunity to students to express their learning as per their learning styles. Similar assessment strategy may not be effective for all students. For example, some students can express and share their learning by writing effectively, others can share their learning by speaking or drawing. Therefore, I am implementing different assessment strategies according to the learning need of students such as one-minute fluency, one-minute essay, three minutes reflection etc." (Interview, 05-12-2018). Similarly, classroom observations also indicated that research participant provided different opportunities for students to express their learning as per their choice such as in writing, orally and through presentation. Students present their learning as per their choice (Classroom Observations, 10- 09- 2018 to 14-12-2018). Students also shared their experiences in FGDs and stated, "teacher is providing us different opportunities to present our learning through different ways. Teacher is facilitating us according to our learning styles" (FGDs, 19-11-2018). Document analysis also indicated that research participant devised additional assessment strategies for each instructional activity to facilitate students in learning and assess students learning and collect students learning evidences (Lesson Plans, 10-09- 2018 to 15-12-2018). Gloria et al. (2018) suggested that formative assessment can develop self-confidence, shape intelligent behavior, and produce positive spirits among students. Formative assessment is the only strategy which is providing opportunities for students to learn and express learning as per their learning styles. Formative assessment gives a space to the teacher to explore students learning by using different strategies such as written, oral, presentations etc. Formative assessment is not only increasing students learning and confidence but it also creates a positive collaborative learning culture in the classroom. Creating a healthy, safe and helpful environment permits learning to occurred in more durable way. Formative assessment is generating a shared collaborative and interactive participation between learners and teachers leading to a fruitful activity which develops a mutual trust and regard for each other. Careful analysis of many research studies

reveals that formative assessment can encourage learners to be attentive in the topic studied, create enthusiasm and provide motivation and advance learning outcomes.

Conclusion

Classroom is a learning place where students having different abilities, skills and aptitude join to learn new concept, content and prepare themselves for future opportunities and challenges. Therefore, teachers must have clear understanding, knowledge and skills of dealing with students having multiple learning styles, needs and preferences and be able to address students' need at maximum level. Research suggested variety of approaches to deal with such situations and differentiated instruction is one of these approaches which teachers can apply in classroom to overcome these challenges. Differentiated instruction is a logical method to categorize, classify and assemble instructional and learning processes that gives importance to each learner and addresses the varied learning requirements of students rather than 'an individual program of instruction'. This method identifies that every student has right to learn based on their learning abilities, interest and preference to achieve their learning goals. Therefore, teachers must have skills to assess students learning to identify students' learning needs, style and interest and then design teaching/learning strategies in such a way that address needs of maximum students in consecutive lessons. Instructions can be effectively differentiated by content, process and product differentiation. What is taught to students in content differentiation should be relatively consistent for all students in the classroom, but the level of complexity of that selected content should vary to address the diverse needs of students by taking into account students' learning profiles, interest, and willingness level. Teachers can address differentiation by processes by designing and modifying activities that take into account students' intellectual, readiness, and interest levels, as well as Bloom's Taxonomy of Learning Domains, and which reinforce students' critical thinking and problem-solving skills. Product differentiation allows learners to share their learning by employing a variety of strategies aligned with their learning styles. Students can improve their learning, cognitive presentation, and expression skills by critically reflecting on the processes and their learning using these strategies.

Recommendation of the Study

The study focused on practices of formative assessment strategies and differentiated instructions and its significance to adjust instructions that support students' learning over the period of time. The study highlighted significant role of formative assessment data for adjusting instructional techniques to address students' learning need using differentiated instruction. Based on the research findings, researcher recommends below areas for further research studied.

- During the research study it found that instructor used more formative assessment strategies then recommended in the course guide, therefore,

researcher recommend revision in the course guide to add more formative assessment strategies in each study guide for ADE program so that instructor will have more options for using these strategies.

- The study identified twenty formative assessment strategies instructor used during the study, therefore, the researcher recommend to share these strategies with other colleges and instructors who would use these strategies to differentiate instructions based on students' learning needs to improve their learning as well as their instructional techniques in the classroom.

- While implementing formative assessment strategies systematic data recording, analysis, categorization and decision making to differentiate and adjust instructional techniques found very fruitful practice to improve instructions and students learning outcomes. Therefore, researcher recommends training all teachers and instructors about above processes to practice this strategy in their respective classrooms effectively to improve their instructions and students learning.

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