“ASSESSMENT IN PRIVATE PRIMARY SCHOOL CHILDREN AFTER SIX MONTHS OF AN EMPIRICAL DIFFERENTIATED PROGRAM: BENEFITS AND CHALLENGES”

presenter

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ABSTRACT: *This study focuses on the assessment of learning progress of 56 ks1 children who were non-native English learners in a private international school in Azerbaijan after a six-month differentiated program. Differentiated instruction was applied in teaching the main subjects like English Fiction/English-non-Fiction, Math, and Science from October till March in three year 2 classes as a sample for Longitudinal study. Four well-prepared teachers in all 4 classes premised different expectations for task completion for students through content, process, product, and learning environment. Children passed a pre-test early in October, a term assessment in late December and mid-term in the middle of March and therefore empirical research (both quantitative and qualitative) was adopted in the study. Those assessments helped to detect development and changes in the children's skills and abilities. Results from the study revealed that all students improved their abilities and skills in all four subjects by the end of six months, after assessing them in the various aspects. Findings also showed that the majority of students in private primary school develop diverse skills and, especially, adapt to learning independently after differentiated instruction. It was decided after the assessment of the percentage of completed homework assignments shown. It was further revealed that private primary school has access to already differentiated online recourses which played a role as a support tool for teachers, hence assessment of tests was practical and effective. Results from the study also revealed that primary school teachers had a range of knowledge and practice in differentiation and its assessment.*

1.0 **INTRODUCTION AND BACKGROUND**:

In Azerbaijan, there are 4438 state and non-state day general educational institutions where a total of 1520186 pupils study (2017-2018). According to the state statistical committee, there were 28 non-state day general educational institutions (at the beginning of school year) in 2017\2018 with a total of 10928 pupils (including 4501 girls) in Azerbaijan. The number of teachers (key staff), was 1398 (Statistical Committee). "Since the academic year 2008-2009, the new educational programs (curricula) and the new school-based assessment system have been applied in the first classes of secondary schools of the country. The "Assessment Concept for the general education system of Azerbaijan Republic" was approved by the Decision no. 9 of the Cabinet of Ministers of Azerbaijan Republic dated 13 January 2013." (MEAZ). In addition to school-based assessment, national and international assessments (PISA, TIMSS, and PIRLS) are also carried out to assess the performance of pupils. From 1st till 11th-grade students take the diagnostic, formative and summative (small, general and final) assessments in written and oral forms in all Azerbaijan public and private schools. (1st-grade students do not take final summative assessment) (Azerbaijan Education Portal, 2019).

Assessment in private primary school children after six months of an empirical differentiated program was conducted at Oxbridge Academy, private school. In 2014 the Oxbridge Academy started as a training and assessment center, and then it has grown into a full-fledged international private school. At the moment the Academy offers Reception, Primary, Lower Secondary, and High Divisions. At all stages, it elaborates a combination of Pearson Edexcel International Curriculum and Azerbaijani Local Curriculum. The syllabuses are international in outlook but retain a local relevance. Its curriculum offers a variety of routes for learners with a wide range of abilities, including those whose first language is not English. Its Primary curriculum caters for pupils in Years 1 to 6 (ages 5-11), based on the UK national curriculum Key Stages 1 and 2, and covers the fundamentals of three core subject areas – English, Mathematics, and Science. Edexcel International Awards in Primary English, Mathematics, and Science are assessed through externally marked Achievement tests at the end of Year 6. (http://oxbridgedu.az/)

According to the Pearson Primary Progress and Assessment guide, assessment is essential and it is something that teachers do instinctively on a day-to-day basis. "Assessment comes in different forms and guises. Much assessment is ongoing and formative as it stems from observations and informs ongoing teaching and learning in the classroom. Rich questioning provides instantaneous feedback for teachers, which can result in adjustments to short-and medium-term planning." (Dee Reid &Kate Ruttle, 2015, p.5)

At Oxbridge Academy teaching influences assessment and assessment influences teaching. Assessment and the curriculum are inextricably linked; all assessments support teachers in determining how well children have understood what they have been taught and should feed into the ongoing teaching and assessment cycle. However, the assessment never constrains teachers' expectations nor limit their endeavors.

Differentiated instruction and assessment are the philosophy for effective practical teaching which involves all students with their diverse abilities, profiles, and needs. It is based on mainly varied approaches and diverse students' needs. Differentiation is a supportive attitude by teachers towards every student's characteristics and abilities. By the help of this approach, each learner gets the same classroom program, let us say curriculum, especially tailored to his\her needs. As it is mentioned, differentiation is an approach that incorporates a variety of strategies. "By differentiating assessments, teachers help diverse students to successfully demonstrate their competencies in particular ways that are fitting and effective for them. By

providing various assessment methods/activities appropriate for particular types of students, the teachers can meet the students' individual needs, thereby helping them to be successful in their learning." (Differentiated Assessment)

At Oxbridge Academy, KS1 students can choose how to be assessed as it is fully flexible. The assessment process in primary education appears in several forms, which can be briefly presented as follows: 1. Initial or diagnostic assessment; 2. Formative or gradual assessment (it helps to determine flexible groups and provide differentiation instruction; 3. Final or overall assessment;

In Grades 1 and 2, the assessment is only descriptive. The Descriptive Assessment allows teachers to inform the pupils as well as their parents of the results of each pupil's efforts, abilities, and aptitudes, as well as of any possible weaknesses in specific fields.

Differentiating assessments can be considered to ask students to do: role-playing, unit college, individual projects, visual presentations, oral presentations, written presentations, summaries and reflections, lists, charts and graphic organizers, group/collaborative activities, comic books, raps/songs/dances/other performances, etc.

2.0 **THEORY/CONTEXT**:

For the first time, Buyiova L. (1976) wrote an article in "Azerbaijan school" journal "Differentiation in Language and Mathematics Teaching" where he suggested that differentiation is vital in math classes as children are unique in calculation skills. After the independence of Azerbaijan republic, Huseynov R. and Ahmadov H. (1992) depicted differentiated method as a development of education. Gardashov T. (2000) mentioned in his article that the abovementioned method is possible only in lyceums and private schools due to resources and tools.
On November 12, 2018 "Expanding Inclusive Education for Children with Disabilities in Azerbaijan" a joint project of the European Union, UNICEF and Ministry of Education was launched. Within the planning and implementation of an inclusive course, differentiation method, its principles, and structure were given and will be taught to over 10000 capital and some region teachers and principals.

Textbook "Modern teaching technologies" by Akif Nazarov (2010) explained the differentiation of teaching and considered it as a part of 60^{th} methods. The author present detailed description for the differentiated method and highlighted the importance of its implementations in the book "Pedagogics (training and education) by Ministry of Education of the Republic of Azerbaijan, Baku Business University (2006).

The vast explanation and detailed description are given in "Literature - 5. Methodical manuals for teachers" by. B. Hasanli, et al. in 2012. Lots of examples on different topics can help the literature teachers to differentiate the lesson. The methods that the authors propose can be applied to the other subjects as well.

Ministry of Education presents detailed instruction on assessments of all types since independence in "Instruction on evaluation and assessment in general education schools" (2012).

3.0 PURPOSE OF THE STUDY: The purpose of this paper was to examine the use of assessment in private primary school children after six months of an empirical differentiated program and its benefits and challenges for year 2, to determine whether differentiated teaching strategies have an effect on learner achievement and lead to an improvement in

understanding the main subjects. Therefore, the study sought to achieve the following objectives:

1. Analyze differentiated instruction and teaching to year 2 classes and establish the quality of the method;

2. Compare assessment results on four main subjects before and after differentiated teaching;

3. Establish the role of international assessment and online tools in students' uplifted skills;

4.0 RESEARCH METHODOLOGY: This study aims to find out the benefits of differentiated instruction in primary classes. The research question of the study was "How can the effectiveness of differentiated instruction in primary be assessed?" and the hypothesis was "All children despite their abilities showed improvement in all four skills by the help of differentiation after the assessment". The following instruments were used as the data collecting source: test results, percentage of completed homework assignments, students' online activities assessment and observation, parents' observations, oral tests, teachers' reflective journals, teacher surveys, and teacher evaluations by the supervising administrator.

As noted, differentiating teaching provides each learner with an equal chance for success and the opportunity for effective, optimal learning to take place. In this research, it was used assessment results to find a solution to the problem of meeting a wide range of learning needs in the private school. A quantitative technique was utilized.

4.1 Sample: A convenience sampling technique was used to select learners from the international private school in Baku, Azerbaijan. It is utilized a "natural formed group", namely learners in a classroom setup, which justified convenience sampling. The school is located in a socio-economically homogenous urban area however draws learners from middle and high socio-economic backgrounds. The school was chosen for the ease of access it afforded for the research. The intent was to keep the sample within the normal school setting and allow learners to function within a familiar teaching and learning context to eliminate extraneous variables.

The learning center was implemented for year 2 class learners. Some basic information is given in the following table 1. Demographic characteristics of participants:

	Number (n)	%
Nationality (n=56)		
Azerbaijani	54	96%
Other	2	4%
Native language (n=56)		
Azerbaijani	13	23%
Russian	42	75%
English	1	2%
Gender identification (n=56)		
Female	20	36%
Male	36	64
Birthdate (n=56)		
2011	1	2%
201	51	91%
2013	4	7%
Year of study at Oxbridge (n=56)		
1 year	19	34%

2 years	23	41%
3 years	14	25%
Children with special needs (n=56)		
Children with learning difficulties or disabilities (hyperactivity, dyslectic, dystrophic, etc.)	5	9%

Oxbridge Academy is an international school with a very diverse group of students in mainstream classes, including gifted students and others with learning difficulties or disabilities. In order not to have learning difficulties at the beginning of the year, subject teachers needed to take into consideration the rate of learning, language skills, literacy, numeracy, prior knowledge and experience of students'. There were a homeroom and teacher assistant together with subject teachers to cater to differentiated teaching as it is difficult to sustain over time. To ensure maximum attainment, struggling learners should still be provided with additional support, such as assistive technology (manipulatives, visual aids, charts, outlines, picture cues, audio-taped books) and personal assistance.

During the academic year, all parents got report cards at the end of each quarter about his\her child's areas of excellence and areas of improvement from all subjects online. Oxbridge Academy grading scale is as follows:

Grading scale	
Level 1	0-30%
Level 2	31-64%
Level 3	65-84%
Level 4	85-100%

Teachers of year 2 classes differentiated the program, as well as its assessment according to children's interest, readiness and learning profile. It helps in enhancing their learning and boosting their ability to show what they have learned. Groups are based on educational needs which is individualized, personalized, authentic and collaborative learning. All students learn the same but demonstrate it differently. Most assessment is done through observation and checklist. Paper pencil test occasionally is done as well as keeping records for each student. It helps to know which learning style each student has. Valuable aspect is to provide data for teachers on how students process and interpret what they have been asked to learn. It allows identifying weaknesses and the strengths in specific areas. Here student volunteers and teachers and student teachers help in learning center time. Students need multiple opportunities to prove that they know the content and to be credited. It shows where students need re-teaching or actual support.

Assessment of differentiated instruction was conducted both for all the students and diverse learners. It was catered mainly in two ways: the same activity with different tasks (on quantity and level of difficulty) and different activities with the same tasks.

4.2. Data collection: A quantitative design was used using analyzing assessment results of learners. Cycle test results of year 2 classes from term 1 pre-test scores, the teaching for which was not differentiated to determine learners' current level of achievement in main subjects. Then, the lessons, which focused on differentiating teaching to meet the individual needs of each learner, was implemented further on during school time, comprising a total of 400 lesson hours (25 weeks of 16 lessons), before the March examinations. The content used in the classes covered all the main lesson curriculum topics taught in terms 1 and a half term 2.

Teachers of English, Maths, and science used mainly resources from www.activelearnprimary.co.uk web page, like an abacus, bug club, science bug, grammar & spelling, phonics bug, and iprimary. That online source provides teachers with the planning, resources, current allocations, activity reports, assessment recourses, mark books, etc. It was extremely useful to use recourses and differentiated materials according to the year, category, book series, book band, genre, and type. That online recourse presents differentiated planning, design flexible timetable sessions, and link-local curriculum planning.

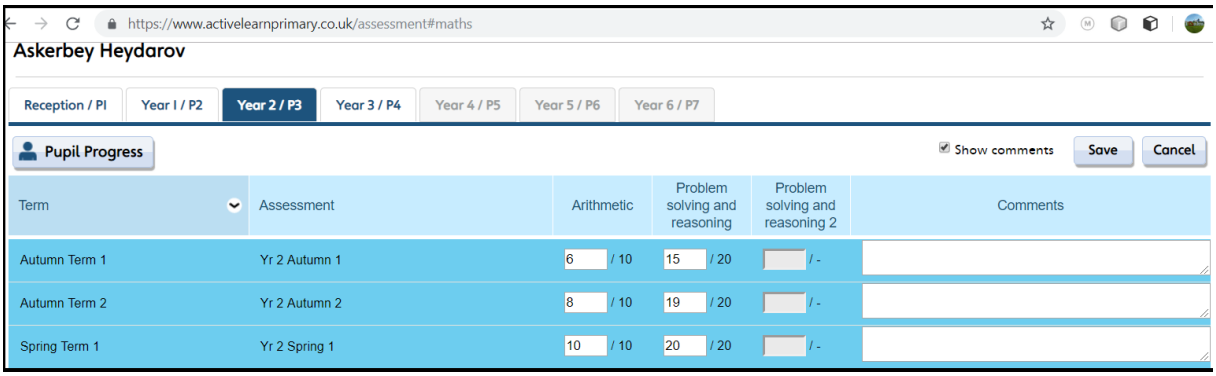
After applying the differentiated approach, the challenging was an assessment as it should be done regularly. Two times (at the end of December and mid-March) it was formal, but often informal, taking notes on students' progress, projects, work, or oral questioning. Informal assessments helped the teachers to drive further instructions. With the abovementioned differentiated task example, teacher involves students with different learning style to acquire grammar rule and apply it suitably.

5.0 DATA ANALYSIS: Some other variables influence and determine learner achievement, such as “language background, interests and home support”, which should be taken into consideration while analyzing the results.

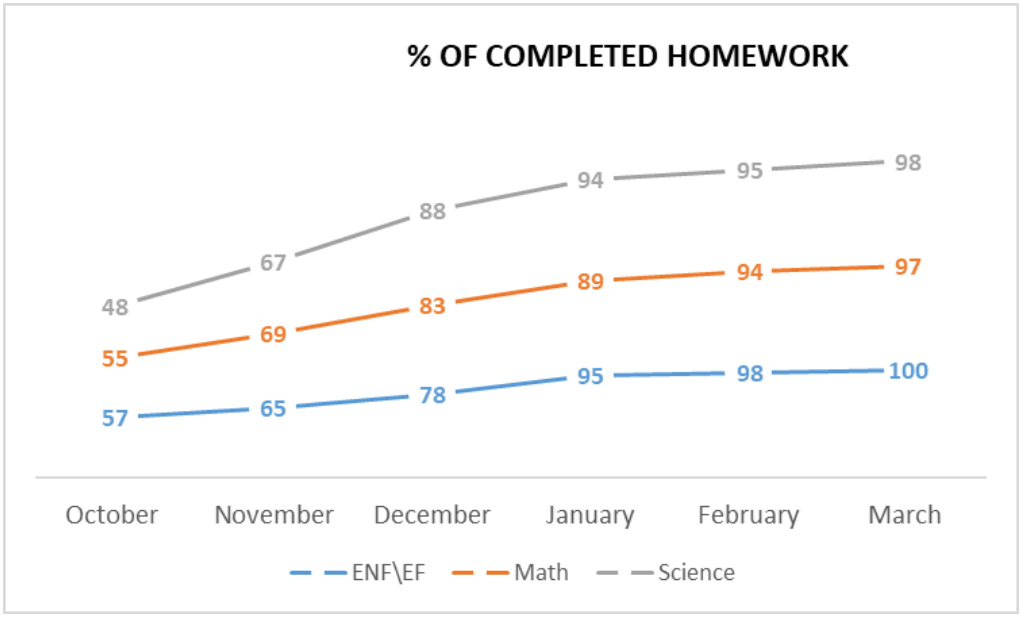
English, math and science teachers in the middle of September conducted a pre-assessment to get acquaintance with students’ readiness, interest and learning profile. It appeared that the level of readiness, four skills (reading, writing, speaking, listening), comprehension and background knowledge of all children varied greatly. As a basic skill, 21 pupils out of 56 could not read and write in English as well as do basic math tasks. Year 2C children did not know any science topics as it was their first year at Oxbridge Academy. Also, due to the age, all children appeared to be little explorers and researchers, willing to apply everything they learn and highly-motivated for the projects. As the study was implemented in a private school, all resources were fully provided for the visual, auditory, tactile and kinesthetic learners. After the diagnostic assessment, it was obvious that children from well-to-do families could not work in grouping and preferred individual work with lots of personal space. All this information helped the teachers to differentiate the further program and apply various approaches for each new topic.

For the English fiction and English nonfiction subjects, the best environmental preferences were carpet activities, reading corner and pair works, whereas for math the best way was large grouping for online challenges. The best differentiation activities were applied in the science lab, of course. Although the differentiation approach was time-consuming, the teachers could use already sorted tasks and activities from online www.activelearnprimary.co.uk webpage.

All four teachers used to access to the Pearson primary English ladder, the curriculum coverage chart, the pupils' and teachers' glossaries. It helps to track pupils' profile and allocate new video tutorials, game, stories, etc. Therefore, online activities assessments showed the elevation from 38% to 96% (October-March) of students' task completion correctly from the first attempt. One of the examples is given. A student named Asker advanced his math problem-solving abilities after the differentiated program, although the lessons were getting more difficult and complicated.



The rate of implemented home tasks after 6 months of differentiated teaching was increased. As can be seen from the table, in all three subjects the students came with readymade homework. Table 3



Formal assessments gave the following results of the differentiated instruction of year 2B:

Subject	Pre-assessment	Summative assessment (I term-December)	Formative assessment (half of second term-March)
English nonfiction			
Mean (average)	75,74	80,74	82,68
Median	73	85	85
Mode	80 (3times)	95 (4 times)	100,85,70 (3 times)
Largest	95	100	100
Smallest	30	40	40
English fiction			
Mean (average)	80,75	85,11	84,26
Median	88	90	86
Mode	90 (4times)	100	100 (8 times)
Largest	98	100	100
Smallest	30	40	40
Math			
Mean (average)	79,36	81,84	83,21

Median	90	90	90
Mode	85(6times)	90	95 (5times)
Largest	90	98	100
Smallest	35	40	40
Science			
Mean (average)	77,55	80,05	80,47
Median	80	82	85
Mode	85 (5times)	75	90 (4 times)
Largest	90	100	100
Smallest	35	42	40

Formal assessment results of year 2A and 2C are almost the same and numbers increase in all subjects.

6.0 ETHICAL CONSIDERATIONS: The independent researcher expressed ethical clearance for the study and permission was obtained from Oxbridge Academy and year 2 class teachers.

7.0 MAIN FINDINGS: Generally, the data shows that differentiation had a positive and substantial impact on student learning. Performance of primary students on different assignments and other class activities exhibited that all 56 participants successfully mastered main lesson objectives. Twenty-four students exceeded the required expectations by completing assignments or activities that reproduced advanced results. In all parameters, data provided additional evidence of the positive impact of differentiated teaching. 21 students who had difficulty with reading could benefit from the strategies that were designed to support text comprehension. Lastly, the catering of various choices led students to feel self-service and private agency in the class.

The findings of the study were based on the assumption that if the differentiated teaching had been successful, the learners would improve in their results during the March mid-term examinations when compared with their achievement in the October and December assessments. According to the averages of the assessment results before and after differentiated instruction, the teachers succeeded in all four classes, as it resulted in an average increase of 2.92% to 6.94% in achievement levels in March examination. Of the 56 learners who participated in the study, all improved their results during the December summative examination as well. However, this finding is not conclusive, as the June term 2 summative assessment results were not taken into consideration.

Percentage of homework completion was also elevated from 48% to 98% from Science, 55% to 97% from Math and 57% to 100% from English lessons. After differentiated instruction, students could complete homework independently and fully.

Some parents were interviewed and the results from the qualitative data indicate that differentiated teaching had a positive influence on learner achievement as far as knowledge and routine procedures are concerned. Overall, the qualitative and quantitative results reveal that the differentiated tasks were valuable and demonstrated a possible strategy, which can be used in all public schools to enhance the learning environment.

A limitation of the study: the findings are not suitable for generalization since this investigation concerns only one grade level. Unfortunately, due to time constraints and limited human resources, the differentiated activities were observed only in one private school. This is a time-consuming process and will require additional effort and preparation on the part of the teacher to get a clear picture of the whole school progress after differentiated

teaching. Still, the results ensure that differentiated instruction is more effective in achieving the goal of meeting each learner's needs.

8.0 DISCUSSIONS AND RECOMMENDATIONS (BENEFITS AND CHALLENGES): The results from the quantitative and qualitative data indicate that differentiated teaching has a positive influence on all indicators. The differentiated tasks offered in the English, math and science classes facilitated effective learning before the March examination and lead to a marginal increase in achievement in main subjects.

Based on the results, it was decided that applying differentiated instruction in public primary schools should be recommended, and the government should retrain local teachers on how to implement and assess differentiated learning. Furthermore, the local curriculum should be altered and differentiated instruction installed at least in local primary schools.

Finally, the experiences with this course highlighted that the fact that effective differentiation requires a significant amount of time, effort, and dedication on the part of the instructor. After the foundational objectives and topical outline were written, the primary assignments and rubrics had to be created. Therefore, there is a necessity to explore current attitudes and practices among public schools before applying it.

9.0 CONCLUSION: The paper focused on the assessment of differentiated teaching as a teaching strategy for year 2 classes in four main subjects in a private international school, in Baku. The aim was to monitor the use of differentiated teaching, its benefits and challenges to determine whether differentiated teaching strategies have an effect on learner achievement and lead to an improvement in understanding of main concepts. It was found that the children yielded success as far as content knowledge, comprehension and problem solving were excelled. This research study explored a possible avenue for improving educational practice in primary classes. Also, a differentiated teaching itools meet the learning needs of a range of learners by accommodating different learning styles. In conclusion, differentiated teaching is a valuable and important teaching tool, which helps to meet the needs of an ever-changing, complex and inclusive education system in Azerbaijan. After this empirical research, it can be advised to apply this method first in public primary schools, later on to the secondary schools. However, before applying it, teachers have to take a special course on differentiation and its assessment. Secondly, schools must be supplied with the necessary tools and resources. Last but not least, the Ministry of Education should be active in the implementation of differentiation method in all schools professionally.

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