

## **What impact does the use of differentiation when teaching writing to KS1 Primary 3 EAL students effectively support and challenge students to create engaging lessons in a primary school in Hong Kong?**

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### **Abstract**

This paper undertakes an investigative approach to evaluate the effectiveness of differentiation on KS1 English as an Additional Language (EAL) Primary 3 students during writing lessons. The researcher undertook a small-scale action research project using multi-data collection through observation, self-noticing and evaluated pre and post-test results to examine the impact of the intervention. The action research used the four-stage model of planning, acting, observing, and reflecting over three cycles which allowed for deeper research and intervention implementation. Findings suggest that implementation of scaffolding and group work allowed for progress in pre and post-test results, supporting the constructivist view that students build on previous knowledge and learn from more experienced others. As it was a small-scale research project, there are still knowledge gaps, and it would be recommended to have continuous research to gain optimal results.

### **Introduction**

Recently, there have been dramatic changes in school management, governmental policies and objectives (McAteer, 2013). Inclusivity in the classroom and students' engagement has been of critical importance in education and educational research. To create an inclusive classroom, teachers must practice adequate differentiation which meets the learning needs of students (Westwood, 2001). Therefore, the teacher should be able to adapt their teaching to suit the students' learning characteristics (Westwood, 2009) which can push students towards achieving their best by maintaining their learning in their Zone of Proximal Development (ZPD) (Vygotsky, 1978). The action research will focus on the impact of differentiation in teaching with Key Stage 1 (Primary 3) English as an Additional Language (EAL) students during writing lessons.

Action research has many names including participatory research, action learning and collaborative inquiry (O'Brien, 1998) which is essentially "learning by doing". In education, action research is a systematic reflection process whereby an individual enquires to understand, evaluate, change and improve a process (Costello, 2003). This allows the individual to take control of their professional development. Before undertaking action research, the researcher identified a difficulty in differentiation in teaching during writing lessons. In the focus school, class sizes are large. Students are streamed based on their grades from the previous term. However, within each class, there are still large ability gaps between students' writing capabilities. Through experience, the researcher realised that their expertise was the ability to adapt lessons and general teaching styles between high and low proficiency classes. However, it became problematic to meet students' individual learning needs during writing lessons where there is a large variety of capabilities. During planning, the intent was to adapt teaching to support all students' learning needs but there was a tendency to focus more on one level which led to learner disengagement. The researcher intended to improve their teaching confidence and practices through planning and introducing more differentiation to best support the learners' needs by using scaffolded worksheets and smaller group work.

The researcher undertook four-step cyclical research in the form of planning, acting, observing and reflecting to evaluate the impact of practising various differentiation methods. The research took place

over four weeks, where the researcher focused on the impact of teaching differentiation to Key Stage 1 (Primary 3) English as an Additional Language (EAL) students during writing lessons.

## Literature Review

### Background of Differentiation

Differentiation has become a hot topic in education, due to the realisation that classrooms are made up of a collection of individuals with varying learning experiences and needs (Colwey, 2018). Differentiation has been widely documented and appears to occur in a variety of terms and operational modes (Eikland and Ohana, 2022). It is simply about using different teaching approaches to suit varying learner needs, to make optimum progress in their learning (Cowley, 2018). It is documented that many educators struggle with differentiation, believing that it can be very time consuming and requires a lot of preparation. Some of the issues include not being able to differentiate between students and therefore, giving too much attention to one set of abilities leading to others becoming disengaged (Blackburn, 2018). Teaching differentiation is crucial in pushing students towards their ZPD. For some students with greater learning support needs, differentiation can be vital in allowing them to understand and progress, which is contrasted with advanced students, where differentiation assists in keeping them challenged and engaged (Cowley, 2018). Therefore, many theorists, policymakers and educators focus on this topic.

### Differentiation in theory

Differentiation is used in response to the constructivist view that learning is a developmental process, and everyone learns at varying paces. Differentiation focuses on students' abilities and how to develop their knowledge by learning through experiences. Its principles can be best aligned with the work of famous constructivist theorists' Jean Piaget and Lev Vygotsky.

Piaget's theory suggests that individuals learn sequentially from birth with each experience building on previous learning experiences which increase knowledge capacity (Piaget, 1962). Piaget believed that intelligence was not a fixed trait and was influenced by interaction with the environment and biological maturation, thus intellectual development depends on the internalisation of interactions and the individual's action taken upon these (Richardson, 2019). It is clear from theory, that learning can occur without the presence of a teacher (Selepe and Moll, 2016), however, it is the role of a teacher to either be a facilitator, Piaget, or a mediator, Vygotsky, of knowledge.

Following Piaget's view, differentiation principles recognise that individuals are at different stages of learning and a teacher's role is to facilitate knowledge development. The teacher should set up learning experiences which provoke cognitive development (Selepe and Moll, 2020). If a teacher is to improve knowledge development, they must create suitable materials which are tailored to students' personal learning needs. Therefore, if materials and learning objectives are efficient, even without direct teacher involvement, a student will attempt to construct their understanding and attempt to assimilate unfamiliar knowledge.

Vygotsky viewed learning as a social process. Like Piaget, Vygotsky believed that curiosity and biological maturation are important, however, they are not the main driving forces in knowledge construction. Vygotsky states that a learner needs to have interactions with more knowledgeable others. In education, he portrays teachers as mediators, who develop students' knowledge through interactions. A teacher's role is to push students towards their ZPD. The teacher is used as a mediator to take students from their *actual* development level, i.e., what they already do know, to the *potential* development level (Vygotsky, 1978), where they are developing their cognitive abilities. Teaching differentiation methods use Vygotsky's principles, believing that individuals need to be pushed towards achieving their optimum learning goals. All students have varying degrees of knowledge and learn in different manners, so if the same teaching approach is used for all students, there would not be effective progression towards their ZPD.

## **Differentiation in policy**

Differentiation in education is a widely addressed concept, due to the rising need for inclusivity in the classroom. Ofsted describes differentiation as “the matching of work to the differing capabilities of learner groups or individuals to extend their learning” (NASBTT, 2020). The focus on including differentiation in the classroom is prominent in Hong Kong policies. Hong Kong’s Education Bureau (EDB) made its main objective to Cater for Learner Diversity. Recently, governmental and school policies have been leaning towards inclusive education and how to deliver this (Yin and Chai, 2020). In response, there has been significant research in Hong Kong into the benefits and how to deliver differentiation in education. Many students are from diverse backgrounds, learning in non-native languages and therefore have different learning abilities. Hong Kong’s EDB adopts a three-tiered approach to the delivery of classroom inclusion:

- Tier 1: Gifted students require differentiated instruction
- Tier 2: Pull-out support systems within the school
- Tier 3: Specialist training beyond the school

By adopting this approach and adopting differentiation in teaching, in theory, all students’ varying learning needs are catered for. However, due to large class sizes and diverse learning needs differentiation can present logistical difficulties and many teachers struggle to fully incorporate suitable methods. Schools may not have the staffing levels to conduct pull-out support systems or have the tendency to focus on one level of student ability. Therefore, policymakers and schools are continuing to develop various differentiation operational methods.

## **Differentiation Methods**

Differentiation in the classroom can occur in several ways: common methods are through differentiated resources and grouping. A common differentiation through resources method is scaffolding. Scaffolding is a learning tool for growth through completing a task in smaller, more manageable steps which helps to achieve greater learner independence (Vygotsky, 1978). It can be used for various versions of the same task to be completed simultaneously. Students who require more support can be given smaller building block tasks while more advanced students are given extension tasks to continue to keep pushing them to their optimum learning level (Tomlinson, 2014).

In an EAL classroom, mastering writing is one of the indicators of academic success as it signals good accuracy and coherence (Vonna, Mukminatien and Laksimi, 2015). Many students have difficulties during writing lessons as it requires planning, writing, and revising. Teaching writing to an EAL class can present challenges due to varying degrees of abilities. Scaffolding is a teaching technique which can help to improve students’ achievements. During writing, it is believed that scaffolding should be used in a systematic way from the pre-task to the final draft (Vernon, 2002). This allows teachers to organise suitable tasks which best respond to the learning needs of all students. These tasks should be able to motivate students, make the task more achievable, provide more learner independence and set clear learning objectives (Stuyft, 2002).

Every class is full of unique individuals with various educational backgrounds and abilities. A method to achieve the most effective learning experience for everyone is differentiation through grouping. Depending on the learning objectives, students can be grouped in mixed abilities groups. De Bono (1986) recommends the use of “Six Thinking Hats” model, whereby the same material or topic is looked at from six different perspectives. Each of the six differently coloured hats represents a different thinking method which is deemed more appropriate than only looking from one perspective. By using De Bono’s model, students are forced to think in a specific manner which requires each member to take on an active role (Carl, 1996). Peer learning can allow for a motivating lesson and create ideas which otherwise would not be created. Using this method during EAL writing lessons is an effective way to increase creativity, social skills and student agency. However, this requires careful planning and supervision to ensure that all students are aware of the learning objectives, on task and grouped suitably. Furthering this view, Kagan (1994) recommends that group work should be fluid and purposeful. Kagan follows the constructivist view of Piaget and Vygotsky,

believing that knowledge development is a sequential process where individuals learn from more knowledgeable others. Therefore, individuals would benefit from the use of mixed ability groups. In writing lessons, mixed ability groups would be beneficial at the pre-writing and final drafting stages. Students can further their creativity, gain meaningful feedback and learn by example.

## **Methodology**

Reflecting on and learning from experiences is a natural part of human nature (McAteer, 2013). We learn by doing and continue to reflect without thinking. However, many individuals tend not to question why practices occur in the way they do, thus leading to only engaging and reflecting at a superficial level. It is critical to continually develop, and educators should undertake action research to improve their teaching and students' understanding. Action research is about evaluating practice to see whether it is as good as it can be and how it can be improved (McNiff, 2016). By identifying areas for improvement and developing these, the researcher will become a reflective researcher and critical thinker (Brookfield, 2013). It is important as educators to regularly reflect and improve, creating continuous professional development. Although many teachers find action research challenging, conducting it can have a positive impact on practices (McAteer, 2013). The benefits of conducting action research are to improve the teachers' understanding, practices and students' learning experience.

The project's action research was a small-scale intervention into the functioning of real-life teaching practices, opening a window for self-reflection and career enhancement (Cohen, Manion and Morrison, 2017). Following the four stage-circular model by Kemmis and McTaggart (1981), the researcher planned, acted, observed and reflected on the impact of teaching differentiation to Primary 3 students during writing lessons. The research was conducted over four weeks covering two writing units. The research introduced various differentiation methods including using scaffolded worksheets and smaller break-out groups (*See Appendix 1*).

The data collection involved a mix of methods including quantitatively and qualitative data collection. By combining qualitative and quantitative data collection methods, the researcher had a more comprehensive understanding of the topic (Bell and Waters, 2018). The data collection used triangulation where the data methods were cross-referenced against each other to compare the findings. Through comparing data, the researcher intended to minimise bias and have more conclusive findings. The researcher was aware that each method has its weaknesses and believed that approaching the same topic from different perspectives led to a better understanding (Bell and Waters, 2018). The researcher undertook qualitative data collection methods of observation and self-noticing and reflection. Qualitative data analysis involves assessing interactions, experiences and documents in their natural context (Gibbs, 2018) which allows the researcher to draw relation to their topic.

## **Observation**

Observation took place by the same co-teacher across the two cycles in a mixed ability class. The co-teacher understood varying students' abilities and the objectives of the research. The observer was aware of the objectives of the impact of differentiation in teaching during writing lessons focusing on the ability to stretch and accommodate learning differences. To improve results' consistency, the observer remained the same across both research cycles.

**Table 1: Researcher's and Observer's check list**

	<b>Highly effective</b>	<b>Effective</b>	<b>Needs Improvement</b>	<b>Does not Meet Expectation</b>
<b>Lesson objectives</b>	Learning objectives are clearly communicated at the beginning of the lesson and continually reflected during activities.	Learning objectives are clearly communicated at the beginning of the lesson and most activities reflect these.	Learning objectives are mentioned but activities do not correlate.	Learning objectives are not stated or clear from activities.
<b>Lesson Pace</b>	Lesson is taught at a suitable pace and logical flow of activities.	Lesson pace is sufficient but at times is too fast / slow for learners.	Lesson pace is not suitable for a lot of learners.	Lesson pace is not suitable for the majority of learners.
<b>Student engagement</b>	Majority of students are engaged and actively participating in the lesson.	Most students are engaged and actively participating in the lesson. Some students are occasionally distracted or not comprehensive.	A lot of students are passive or not comprehensive.	Majority of students are regularly passive, distracted or not comprehensive.
<b>Student Agency</b>	Majority of students are actively taking responsibility for their learning and offering support to others.	Most students are actively taking responsibility for their learning. Some students are reliant on teachers' directions.	A lot of students are reliant on teacher's directions and not taking self-initiative.	Majority of students are reliant on teacher's directions and not taking self-initiative.

### **Self-noticing**

The researcher observed the impact of the implementation of various differentiation strategies. There was a record of where the pitch of the lesson, lesson activities or materials were not suitable. Effective differentiation methods were highlighted and assisted in further implementation during cycle two. The self-checklist notes were compared against the same checklist used by the observer. Comparing against the observer's notes will solidify the evidence of the impact of teaching various differentiation methods.

### **Pre and Post Test Results**

Students took a standardised writing test before each cycle, the pre-test allowed for an understanding of students' current level implementing differentiation. The post-test results were compared to understand how teaching various differentiation methods impacted students' writing abilities. The quantitative results numerically showed progression for easy analysis.

### **Ethics**

When conducting research, it is vital to consider ethics and minimise bias. To minimise bias, mixed data collection methods were used to produce an analysis of recorded data which was as free from prejudice as possible in the circumstances. The observer was aware of the project and its objectives. Confidentiality was

maintained throughout the action research. The research did not harm students' learning as the objective was to assess the impact of the researcher's differentiation methods.

## **Data Collection and Analysis**

Action research involves evaluating practices through identifying problems, reflecting, and taking action to find solutions (McNiff, 2016). Through self-evaluation, the researcher identified differentiation in teaching during writing lessons as an area for improvement. There was a tendency to teach with materials which suited one level of students, leading to others becoming passive and not progressing.

The data is presented in two cycles where the researcher followed a sequential process of planning, acting, observing and reflecting for the next cycle. This allowed the researcher to comprehend the impact of introducing differentiation methods on lessons and teaching. Data was discussed through the lens of relevant theory to draw conclusions.

### **Cycle 0:**

#### **Plan**

The researcher identified a difficulty in teaching writing to EAL students. The varying levels of students in the class presented problems, students were not being supported enough or pushed towards their ZPD.

#### **Act**

The teacher attempted to introduce separate levelled tasks for students to complete with aid of an additional adult, a teaching assistant (TA). The researcher believed this would allow for greater learning support as TA support can have a positive impact on students' progress and facilitate pupil engagement in learning activities (Alborz *et.al*, 2009).

#### **Observe**

It was clear that separating students by level using completely different learning materials was not suitable. It was observed that having students complete different tasks caused disruption. The flow of the lesson was disrupted, and students couldn't process why others were completing different activities. There was a lack of coordination between the researcher and the TA, and the lesson objectives were not achieved.

#### **Reflect/ Plan**

Further coordination was required between the TA and researcher to have clear lesson objectives and how to optimise learning for students.

## Cycle 1:

### Use of 4 Stage Model

#### Cycle 1 (Week 1-2):

Plan	Act	Observe	Reflect/plan
Students undertake a standardised pre-writing test which will streamline students' capabilities.	Based upon scores, identify key learning issues. Develop scaffolded tasks.	Students will complete a post-writing standardised assessment to check impact of differentiated scaffolding.	Based on student performance, will plan the next cycle. Further differentiation support needed.  Solution: introduce mixed ability and streamlined abilities group learning

#### Plan

During the initial study of Writing Unit 1, it was identified that the initial problem, on many occasions, during writing lessons stemmed from varying student abilities. To understand the extent of the differing abilities, at the beginning of Writing Unit 2, all students undertook a standardised pre-writing test. The results highlighted that there were clear differences in capabilities and differentiation teaching practices were needed. Students learning at different paces can be seen in the constructivist view of Piaget, who believed that learning is a sequential process which builds on previous knowledge experiences (Richardson, 2019). Therefore, to progress students' knowledge development, the researcher took upon the role of a facilitator and took action to aid this development.

#### Act

The researcher believed to best accommodate varying capabilities, differentiation by resources should be implemented and scaffolded worksheets were introduced (*See appendix 4*). The researcher was not initially confident in differentiation in teaching and believed introducing building blocks for students to develop their writing abilities in stages would be beneficial. As students learn through experiences and build upon previous knowledge, scaffolding would be an effective way of increasing learner progress and independence. Following Vygotsky's view, the teacher would be used as a mediator to move towards their optimum learning level. Students would have a range of scaffolded worksheets which would be determined based on abilities.

#### Observe

The introduction of scaffolded worksheets had a positive impact on students' progress and the researcher's teaching methods. Piaget recommended that the teacher should facilitate learning by providing learning experiences which stimulate cognitive development (Selepe and Moll, 2020). It was observed by the observer that during week 2, scaffolded worksheets allowed for greater explanations and learner support.

Week 1:	Week 2:	Week 3:	Week 4:
<ul style="list-style-type: none"> <li>-Lesson pace was too fast.</li> <li>-Tendency to only accommodate the higher levelled students.</li> <li>-Good use of vocabulary to try to encourage new ideas.</li> <li>-Try to cater for broader learner diversity.</li> </ul>	<ul style="list-style-type: none"> <li>-Scaffolded worksheets and explanations were useful in reaching wider range of students.</li> <li>-Lesson flow seemed to be disrupted by students not being used to different worksheets.</li> <li>-Consider more student agency and give more learner responsibility.</li> </ul>	<ul style="list-style-type: none"> <li>-Scaffolded tasks continued to be useful for students.</li> <li>-Group-work was a step in the right direction for learner responsibility but could be further developed by grouping by ability. Some students in mixed groups became disengaged.</li> </ul>	<ul style="list-style-type: none"> <li>-Teaching pace is at a more suitable level.</li> <li>-Splitting groups by ability was effective to create a challenge for the majority of students.</li> <li>-Continue to scaffold worksheets and explanations. Scaffolding gives greater learner independence.</li> </ul>

Splitting the task into smaller, more manageable activities allowed most students to increase their writing abilities with 75% of students showing an improvement in content, language and organisation from the pre-test. However, despite the students was still room for improvement. It was observed that there was room for further student agency and creating a better lesson flow to maximise lesson time.

### Pre and Post Test Results from Cycle 1

No.	Content (0-12)	Language (0-12)	Organisation(0-6)	No. of words	*Story Structure (Y/N)	Pre- Test Score (/30)	Post-Test Score (/30)	Improvement from (Y/N)
1	1	1	0	4	N	4	6	Y
2	3	2	1	19	N	3	6	Y
3	8	8	4	20	N	14	20	Y
4	5	5	3	74	N	12	13	Y
5	7	6	4	73	N	18	17	N
6	10	10	5	105	N	22	25	Y
7	1	1	0	14	N	0	2	Y
8	0	0	0	0	N	0	0	N
9	1	1	1	10	N	3	3	N
10	5	5	2	12	N	8	12	Y
11	6	5	3	36	N	9	17	Y
12	11	10	5	133	N	23	26	Y

### Reflect/ Plan

Following the positive impact of scaffolded worksheets, the researcher intended to continue to implement these in cycle 2. There was still room for improvement in students' progress, and there was room for increased student agency. To increase student agency, the researcher decided to implement group work in the pre-writing stage of cycle 2. The researcher was aware that group work needed to be fluid and purposeful (Kagan, 1994) and believed that mixed ability groups in the pre-writing stage would allow for a purposeful learning experience by learning from more knowledgeable others and increase creativity.

## Cycle 2:

### Cycle 2 (Week 3-4):

Act	Observe	Reflect / further planning
Continue to use scaffolded worksheets.  Students will work in mixed abilities for writing planning.  Make better of TA, through planning for an additional adult, to allow for ability streamlined group activities.	Students will complete another writing test to benchmark against cycle 1 results.	Based on student results, make a judgement on methods and consider further improvements to teaching methods.

#### Act

During the pre-writing and planning stage, students worked in mixed ability groups to plan their stories. Following De Bono's "Six Thinking Hats", students took on various roles and looked at the picture description from different perspectives. By taking on different group roles, students were forced to actively engage with the learning materials and task (Walter, 1996). Although the materials were the same, working in mixed ability groups using De Bono's "Six Thinking Hats" model facilitated active learning. It allowed students to learn by experience through looking at other peoples' ideas and understandings. The purpose of this was to allow students to share their ideas and give meaningful feedback, all to increase creativity and writing abilities. Furthermore, in the planning and drafting stages, students continued to use scaffolded worksheets. The worksheets were streamlined based on abilities with all students completing the same writing task with more learner-suitable resources, allowing the researcher to make optimal use of differentiation by resources, which suitably challenged students.

In the drafting stage, the researcher made optimal use of an additional adult in the classroom and better coordinated with the TA to organise students' learning experience. Students were streamlined into ability groups to allow for a deeper explanation of scaffolded worksheets and more tailored learning tasks. The purpose was to allow students to work in smaller groups allowing for optimal learning support.

#### Observe

Through the introduction of various differentiated teaching methods, the researcher's confidence increased between cycles. It was observed that lesson pace and flow were more suitable which had a positive impact on students' learning. Better coordination with the TA allowed for greater learning support through streamlining students into smaller ability-based groups. The continuation of scaffolded worksheets was beneficial, in cycle 2 students were more familiar with the logistics of using scaffolded worksheets and how to use these to improve their writing. The researcher had developed their experience in teaching through scaffolding which allowed for better explanations and lesson pace. During the reflection on self-noticing from lessons, it was clear that group work created a more active learning environment. Students enjoyed the pre-writing activities and were taking responsibility for their learning, offering advice and sharing ideas. By the end of cycle 2, 84% of students had shown an improvement in their writing abilities implying that the researcher's implementation of various differentiation methods had been successful in increasing students' writing abilities and lesson engagement.

## Self-noticing week 1-4

### Week 1

	Highly effective	Effective	Needs Improvement	Does not Meet Expectation
<b>Lesson objectives</b>	Learning objectives are clearly communicated at the beginning of the lesson and continually reflected during activities.	<b>Learning objectives are clearly communicated at the beginning of the lesson and most activities reflect these.</b>	Learning objectives are mentioned but activities do not correlate.	Learning objectives are not stated or clear from activities.
<b>Lesson Pace</b>	Lesson is taught at a suitable pace and logical flow of activities.	<b>Lesson pace is sufficient but at times is too fast / slow for learners.</b>	Lesson pace is not suitable for a lot of learners.	Lesson pace is not suitable for the majority of learners.
<b>Student engagement</b>	Majority of students are engaged and actively participating in the lesson.	Most students are engaged and actively participating in the lesson. Some students are occasionally distracted or not comprehensive.	<b>A lot of students are passive or not comprehensive.</b>	Majority of students are regularly passive, distracted or not comprehensive.
<b>Student Agency</b>	Majority of students are actively taking responsibility for their learning and offering support to others.	Most students are actively taking responsibility for their learning. Some students are reliant on teachers' directions.	<b>A lot of students are reliant on teacher's directions and not taking self-initiative.</b>	Majority of students are reliant on teacher's directions and not taking self-initiative.

## Week 2

	Highly effective	Effective	Needs Improvement	Does not Meet Expectation
<b>Lesson objectives</b>	Learning objectives are clearly communicated at the beginning of the lesson and continually reflected during activities.	<b>Learning objectives are clearly communicated at the beginning of the lesson and most activities reflect these.</b>	Learning objectives are mentioned but activities do not correlate.	Learning objectives are not stated or clear from activities.
<b>Lesson Pace</b>	Lesson is taught at a suitable pace and logical flow of activities.	<b>Lesson pace is sufficient but at times is too fast / slow for learners.</b>	Lesson pace is not suitable for a lot of learners.	Lesson pace is not suitable for the majority of learners.
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### Week 3

	Highly effective	Effective	Needs Improvement	Does not Meet Expectation
<b>Lesson objectives</b>	Learning objectives are clearly communicated at the beginning of the lesson and continually reflected during activities.	<b>Learning objectives are clearly communicated at the beginning of the lesson and most activities reflect these.</b>	Learning objectives are mentioned but activities do not correlate.	Learning objectives are not stated or clear from activities.
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#### Week 4:

	Highly effective	Effective	Needs Improvement	Does not Meet Expectation
<b>Lesson objectives</b>	Learning objectives are clearly communicated at the beginning of the lesson and continually reflected during activities.	<b>Learning objectives are clearly communicated at the beginning of the lesson and most activities reflect these.</b>	Learning objectives are mentioned but activities do not correlate.	Learning objectives are not stated or clear from activities.
<b>Lesson Pace</b>	<b>Lesson is taught at a suitable pace and logical flow of activities.</b>	Lesson pace is sufficient but at times is too fast / slow for learners.	Lesson pace is not suitable for a lot of learners.	Lesson pace is not suitable for the majority of learners.
<b>Student engagement</b>	<b>Majority of students are engaged and actively participating in the lesson.</b>	Most students are engaged and actively participating in the lesson. Some students are occasionally distracted or not comprehensive.	A lot of students are passive or not comprehensive.	Majority of students are regularly passive, distracted or not comprehensive.
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#### Data analysis

To gain an unbiased comprehensive understanding of results, data was triangulated. Method triangulation involved using multiple data sources to evaluate the same phenomenon (Carter *et al.*, 2019). The researcher drew conclusions from observations, self-noticing and pre and post-test results. It was clear from the early stage of cycle 1, that there was a tendency to support only higher levelled students, with materials not being tailored to cater for learner diversity, thus lower ability students became disengaged and were unable to progress. This was observed by over 50% of students achieving a low grade in their pre-writing test. The lack of catering for learner diversity was furthered by the observer highlighting that “*only higher levelled students are accommodated*” and that the “*lesson pace was too fast*”. It was the researcher's role to facilitate learning and provide a learning bridge between what the student was capable of and what the student needed to do to succeed (Carolan and Guinn, 2007). The researcher followed the constructivist views of Piaget and Vygotsky, believing that every student learned at a different pace and needed to be supported by a more experienced other to progress. Therefore, in the second stage of cycle 1, scaffolded worksheets were introduced. The positive impact was reflected by 75% of students showing an improvement from pre-test, with no scaffolding, and post-test using scaffolded worksheets. Designing multiple versions of the same task allowed for better support. By allowing students different options which accommodate various thinking patterns, students achieve more in their learning goals (Carolan and Guinn, 2007) and have greater learner independence. The researcher's implementation of Vygotsky's scaffolding

principles, in the form of scaffolded worksheets, helped to push students from actual development towards their potential development (Fani and Ghaemi, 2011). The positive impact was echoed in the observer's comments and self-noticing reflections. The use of scaffolded worksheets helped to "reach a wide range of students" and resulted in "less student disengagement and confusion". The views were echoed in quantitative evidence of student post-test results. Through building upon knowledge students already knew, there were more suitably challenging activities for students. However, there was still room for improvement with 100% of students not achieving a sufficient structure. The researcher intended to implement further differentiation strategies in cycle 2.

The implementation of group work had two purposes: to increase creativity during the planning stage and to challenge students suitably during the writing stage. The researcher recognised that in mixed-ability classes students have different strengths and weaknesses and learn at different paces (Bremner, Teacher and Lanarkshire, 2008). The use of De Bono's "Six Thinking Hats" had an overall positive effect with 40% of students showing an improvement in content and 75% achieving higher results in language. During the pre-writing stage, students were sharing ideas, vocabulary, and learned from each other. Although there was an improvement, it was contrasted by the observer and self-noticing that some students were "being more dominant" and "others became disengaged". The researcher could have spent more time setting the goals of the lesson and reminded students of these during the lesson (Bremner, Teacher and Lanarkshire, 2008) which could allowed for increased student agency through self-reflecting on their progress.

In the final stage of cycle 2, streamlining students by abilities was beneficial, shown through a more suitable lesson pace which "created a suitable challenge for students". Streamlining by ability allowed the researcher to support specific learning needs through using adaptive teaching methods to create a safer learning environment (Wilson *et.al*, 2012). The positive impact was not only highlighted by the observer and in self-noticing but in quantitative evidence of 84% of students writing abilities progressing between cycles 1 and 2.

### Pre and Post Test Results Cycle 2

No.	Cont ent (0-12)	Language (0-12)	Organisatio n(0-6)	No . of wo rds	*Story Structure (Y/N)	Pre- Test Score (/30)	Post-Test Score (/30)	Improvement from (Y/N)
1	4	5	2	20	N	8	11	Y
2	5	5	3	23	N	10	13	Y
3	8	8	5	71	Y	15	21	Y
4	6	7	3	64	N	12	16	Y
5	7	7	4	76	Y	18	18	N
6	10	11	4	113	Y	22	25	Y
7	3	3	1	19	N	3	7	Y
8	1	1	1	12	N	2	3	Y
9	1	1	1	9	N	1	3	N
10	5	5	3	24	N	7	13	Y
11	6	6	4	45	Y	13	16	Y
12	9	10	5	164	Y	24	26	Y

It could be argued that although the researcher's implementation of differentiated teaching practices had an overall positive impact, it did not fully satisfy the learning needs of all students due to some disengagement and the researcher not fully explaining the purpose of activities. Therefore, it would be recommended to complete a 3rd cycle of action research. The researcher should continue to assess their

teaching practices and implement more differentiated methods including scaffolded worksheets, allowing more student agency, and taking more of a facilitator role. By providing student agency, the teacher can take a more *guiding* than *providing* role which should help to move students from the zone of *actual* development towards their *potential* development level.

## **Conclusion**

The purpose of the action research project was to assess the impact of differentiation in teaching on KS1 EAL writing lessons. By using multiple data collection methods, the researcher was able to comprehend the result of teaching various differentiation methods on students' progress. By evaluating current literature, the researcher took a constructivist view recognising that cognitive development is a sequential process which happens at different paces (Piaget, 1962) and believed that they should facilitate students' writing abilities development. Following data analysis, it would seem that the implementation of scaffolding and group work allowed for progress in pre and post-test results, supporting the constructivist view that students build on previous knowledge and learn from more experienced others. Although the researcher recognised the success of writing progress, there is still room for further improvement.

The researcher believes that action research is a continuous process which is very important to enhance teaching practices and in turn students' learning experiences and therefore, seeks to continue to implement current differentiation methods. The researcher will optimise the use of their TA during group work and clearly explain the objectives of the task, returning to these during the lessons. The researcher will continue to pursue the four-stage model of planning, acting, observing and reflecting to carry on to assessing the impact of various differentiation methods.

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