INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN PROGRESSIVE EDUCATION & DEVELOPMENT

OPEN ACCESS JOURNAL

Vol 11, Issue 3, (2022) E-ISSN: 2226-6348

Science Teachers' Level of Concern on Dual Language Programme (DLP) in Primary Schools in Sri Aman District

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To Link this Article: http://dx.doi.org/10.6007/IJARPED/v11-i3/14368 DOI:10.6007/IJARPED/v11-i3/14368

Published Online: 22 August 2022

Abstract

This study aims to identify the Science teachers' level of concern towards the implementation of *Dual Language Programme* (DLP) in primary schools in Sri Aman District. *Concern Based Adaptation Model* (CBAM) is applied as the theoretical framework. Meanwhile, the adapted *Stage of Concern Questionnaire* (SoCQ) is used as a research instrument to determine the level of teacher's concern. A total of 45 Science teachers were selected by using purposive sampling method. Descriptive data analysis was conducted to generate demographic group profiles as well as general profiles of teachers'concerns based on the SoCQ Quick Scoring Device guidelines. The results of the study found both types of profiles; general and demographic, showed high concern for awareness (Stage 0), information (Stagel 1) and personal (Stage 2), whereas, low concern intensity scores for collaboration (Stage 5) and refocusing (Stage 6). Such concern level profiles reflect that teachers show little involvement with, general awareness of and uncertain feeling towards the DLP. The results are important for the stakeholders to provide intervention programmes to support teachers to undergo the curriculum innovation.

Keywords: Dual Language Programme (DLP), Concern Based Adaptation Model (CBAM), Level of Concern, Teaching and Learning, Science

Introduction

The national curriculum has evolved since its official inception in 1955. The changes in national education policy were driven by the desire to make the national education system comparable to the advanced foreign education systems. Therefore, in order to realize this aspiration, the reforms carried out must suit the current situation in line with global development and paradigm shift to achieve national aspirations. Therefore, the government has acted to make the use of English immersive as an effort to prepare young people to withstand the needs of the 21st century through a plan called the Malaysian Education Development Plan (PPPM) 2013-2025 to provide an environment for greater use of English (KPM, 2012).

According to Ministry of Education Malaysia (KPM, 2012), the first wave (2013-2015) aims to strengthen the existing system and the second wave (2016-2020) focuses on efforts to introduce structural changes. Meanwhile, the third wave (2021-2025) leads to action to

extend structural change. During the second wave, one of the government's initiatives to empower the English language was through a programme known as the Dual Language Programme (DLP).

Since the implementation of DLP in 2018, there have been studies conducted by academics to identify the perception, readiness, concern and effectiveness of the programme. Findings from these studies have shown the existence of issues related to the implementation of DLP. For example, students find it difficult to be involved in the learning process due to language weaknesses that cause DLP subject score results to decline (Suliman et al., 2018; Ismail & Yusoff, 2020).

The negative impact of DLP on students is also stated by Norazian (2009) that the use of English in Mathematics is a problem for students because the low level of English proficiency has made them difficult to understand the concept of a learning as well as deterioration in Mathematics.

Teachers are crucial factor to determine the success of the Dual Language Programme because its effectiveness is highly dependent on their willingness and concern. However, these educators also face some challenges in the implementation of this program such as the lack of proficiency in English. For example, the study of Noorzeliana et al. (2017) found that teachers are less skilled and less prepared to teach Science and Mathematics in English. In fact, the Malaysian curriculum policy that makes full use of English in teaching and learning adds more pressure to the teachers.

Moreover, concerns over the language used in public assessment, limited resources and challenging Curriculum Standard of Primary School (KSSR) syllabus are issues raised by teachers towards the implementation of DLP programs (Noorzeliana et al., 2017). In addition, there are also research results that show the trainee teachers who will teach Science and Mathematics give a bad view on the implementation of DLP (Melor & Saiful, 2017).

Based on the above discussion, it can be concluded that teachers' lack of skills in the use of English is a major challenge to them in addition to the lack of reference materials and challenging KSSR syllabus. Accordingly, a study to identify the level of concern of teachers on the implementation of DLP is appropriate to be conducted. Therefore, this study was conducted to examine the level of concern of Science teachers on the implementation of DLP in teaching and learning Science in primary schools in Sri Aman district, Sarawak.

Research Purpose

The purpose of this study is to identify the Science teachers' level of concern in the implementation of DLP in primary schools in the district of Sri Aman, Sarawak.

Research Objective

The objectives of this study are to:

1. identify the level of concern of Science teachers on the implementation of DLP based on age, academic qualification, years of teaching experience and number of time attended DLP course.
2. identify the general profile of Science teachers' level of concern in the implementation of DLP.

Research Questions

The research questions are as follows:

1. What is the level of concern of Science teachers on the implementation of DLP based on age, academic qualification, years of teaching experience and number of time attended DLP course?
2. What is the general profile of Science teachers' level of concern in the implementation of DLP?

Statement of Problem

Dual Language Program (DLP) is a curriculum innovation in which Science and Mathematics subjects in primary schools are taught using English (KPM, 2018). This innovation creates problems for students and teachers. For example, students do not understand the teaching delivered by teachers during DLP classes as the findings of the study of Suliman et al. (2018) who said that students face difficulties in lessons related to the language they are less proficient in. Meanwhile, the challenge of teachers can be seen in the study of Aziz and Yang (2010) who found that teachers face problems in explaining a topic to students. The situation is consistent with the opinion of Fullan and Stiegelbauer (2016) who stated that any change that occurs will pose various challenges.

The challenges that arise as a result of curriculum changes will raise various issues in the education system. Among the DLP implementation issues among teachers that have been identified through past studies are poor proficiency in English, lack of willingness to teach Science using English, lack of reference materials and concerns over the challenging KSSR syllabus (Noorzeliana et al., 2017).

DLP implementation issues that arise among teachers will affect their teaching methods. For example, when a teacher's level of English proficiency is low, then they are unable to deliver the teaching of the DLP subject professionally. Prof Emeritus Dr Abdullah Hasan also gave his views on the effect of DLP that is, teachers and students who are not proficient in using English will cause a decline in student performance in mastering both Science and Mathematics.

DLP implementation issues among teachers should be given serious attention to avoid serious problems in the future as has happened to the PPSMI (*Teaching and Learning of Science and Mathematics in English*) program which was canceled in 2012.

Curriculum change will drive teachers to change since teachers are agents to innovation and curriculum change itself (Fullan & Stiegelbauer, 2016). Furthermore, the success and failure of an innovation in the curriculum depends on the way teachers interact with students because they are responsible for implementing the innovation in the classroom (Bantiwini, 2009; Wang, 2013; Mok, 2003). If teachers are not able to deliver lessons effectively, then students will be plagued by anxiety, lack of confidence and motivation and become inactive while following the teaching and learning process (Ashikin, 2004).

Although there are many factors that influence the process of curriculum change, but the role of the teacher is one of the main factor (Conray, 1999; Pilot, 2007). Therefore, they think it is appropriate to examine teacher factors before a curriculum innovation is implemented. The findings of their study indicate that the implementation process of curriculum change will be disrupted if the teacher is not clear about the change (Conray, 1999; Pilot, 2007).

In addition, many studies on the effectiveness of curriculum change have been conducted. In most of the studies, their findings showed that teachers were incompetent in terms of teaching strategies and the goals of the new curriculum reform (Peeraer et al., 2009; Puteh et al., 2016).

Since teachers are key factors or agents in determining the success of a curriculum change (Fullan and Stiegelbauer, 2016; Bantiwini, 2009; Wang, 2013), then, this study coincides with the aim of identifying the level of teacher concern on the implementation of DLP especially for Science teachers in primary school in Sri Aman District.

Theoretical Framework

The theoretical framework used in this study is based on the Concern-Based Adoption Model (CBAM) or *Concern-Based Adoption Model* (CBAM) developed in the 1970s by the *Research and Development Center for Teacher Education* in Austin, Texas. Hall and Hord (1987) have produced the model as a reference for teachers to study the level of teachers' concern for curriculum change. The CBAM model has been widely used and validated in academia and educational psychology since the model was introduced. According to Lo (2018), this theoretical framework is beneficial to almost all fields that study technology for development because the process of change adopting innovation must be understood and addressed effectively in order for a project to succeed.

The above statement gives the opinion that teachers are the key to innovation and improvement in education because their willingness to adapt to change will determine whether an innovation succeeds or fails (Lo, 2018). According to Tunks and Weller (2009), without active intervention to introduce a change, teachers' general perceptions of good teaching remain entrenched in their own educational experiences as students, from primary to their time as pre-service teachers. This view has a high tendency to persist, and if innovation and change occur, teachers must be confident of the usefulness of such an innovation, which should then be reflected in action changes that include thoughts and actions, perceptions and behaviors (Tunks & Weller, 2009).

This study chose to use the CBAM model even though there are other models or theories such as Rogers' (1983) innovation dissemination theory that have been widely adopted and provide very meaningful descriptions of processes and constructs. The selection of the CBAM model is based on its advantages in that it not only provides a theoretical framework, but also provides tools to conduct research as well as interpret its results. Most importantly, this model focuses on teachers who are key agents in the change process (Donovan, Hartley, & Struder, 2007). Thus, the CBAM model also provides a useful framework not only for designing teacher training and program development, but also useful for encouraging the implementation of changes in policy (Hollingshead, 2009; Khoboli & O'toole, 2011).

Concern-Based Adoption Model (CBAM)

Concern-Based Adoption Model (CBAM) is a research reference for teachers to determine the level of teacher concern in curriculum innovation. According to Hall and Hord (2014), concern can be classified into seven stages namely Stage 0 (Awareness), Stage 1 (Information), Stage 2 (Personal), Stage 3 (Management), Stage 4 (Impact), Stage 5 (Collaboration) and Stage 6 (Refocus), while these seven levels are divided into four levels of concern which include Not Relevant (Stage 0), Self (Stage 1 and Stage 2), Task (Stage 3) and Impact (Stage 4, Stage 5 and Stage 6) as described in Table 1.

Since CBAM emphasizes that the success of an innovation depends on the individual in an institution, then teachers must be given primary focus so that the new innovation can be implemented effectively and successfully (George et al., 2013). Therefore, the selection of CBAM model to be applied in this study can provide a clear picture of the level of concern of

Science teachers towards the implementation of DLP. The findings of this study can also be used by stakeholders, especially the Ministry of Education Malaysia to think of ways to solve problems that arise about DLP. In addition, many researchers acknowledge that this model is particularly suitable for use because teachers will go through seven stages of concern before and while implementing an innovation in education.

The CBAM model was used by the researchers to examine the staff's concern for the Master of Philosophy in Teacher Education Program and the level of preschool teachers' concern about the play approach in teaching Malay language (Sultana, 2015; Roselita et. al., 2017). The same model was also used to identify the level of teachers' concern for the KSSR (Tan & Lee, 2015). In conclusion, the CBAM model proved to be suitable and effective as well as widely used in educational research. According to Petherbridge (2007), the widespread acceptance of the CBAM model is due to its advantages which aim to understand the behavior, attitudes, ideas and judgments of individuals towards an innovation. Therefore, the used of this adapted CBAM model is the right choice for the study.

Table 1
Levels of Concern Related to Innovation: Definition by Stages

Level of Concern	Stage of Concern	Definition
Not Relevant	0 - 0 Awareness	Teachers show little concern and involvement towards innovation.
Self	1 Information	Teachers show general awareness of innovation and interest in learning more details about it.
	2 Personal	Teachers concern on their responsibilities, abilities and the impact of the inovation toward themselves and their daily activities.
Duties	3 Management	Teachers focus on the processes and tasks in implementing innovations as well as optimizing the use of resources and information, including time management.
Impact	4 Impact	Teachers emphasize the impact of innovation on students, especially student achievement and competence.
	5 Cooperation	Teachers collaborate with other colleagues to increase the effectiveness of innovation.
	6 Refocus	Teachers tend to look for the advantages of innovation and other alternatives to replace it.

Source: Adaptation of Hall and Hord (2014)

Based on the opinion that teacher concern involves progress in the change process, Hall and Hord (2014) illustrate it further when explaining that an experienced teacher will become like a novice teacher when a new curriculum is implemented. This is because teachers are forced to teach new topics that include new content and new pedagogical content knowledge (Sanders & Ngxola, 2009). Thus, teachers' concern will show the highest intensity at the Self -Concern level which is the initial level of innovation. However, the intensity will shift to the Task Concern Level and subsequently to the Impact Concern Level as a teacher becomes more experienced in handling innovation (Hall & Hord, 2014).

Methodology

Research Design

A quantitative survey research design was used in this study. Meanwhile, an adapted level of concern questionnaire or *Stage of Concern Questionnaire*, SoCQ (George et al., 2014) was used as a data collection instrument. The questionnaire was constructed based on the CBAM model (Hall and Hord, 2014). There are two sections in this questionnaire, namely Section A which contains 4 demographic items while Section B contains 35 items which consist eight points according to the Likert Scale.

The Participants

The target participants for this study were selected by purposive sampling, whereby all primary school science teachers who teach DLP classes in the district of Sri Aman, Sarawak. Therefore, the questionnaire was distributed to 54 Science teachers who teach in 27 primary schools in Sri Aman district, Sarawak. However, only 45 teachers answered the questionnaire. The criteria of respondents were divided into age, academic qualifications, teaching experience and number of times attending DLP courses (Table 2).

Table 2
Summary of Respondent Descriptions

Variables	Demographics	Frequency N = 45	Percentage (%)
Gender	Man	22	48.9
	Women	23	51.1
Age (Years)	20 - 29	7	15.6
	30 - 39	13	28.9
	40 - 49	14	31.1
	50 and above	11	24.4
Academic qualifications	Not a Graduate	7	15.6
	Graduate	31	68.8
	Advanced Graduate	7	15.6
Teaching experience (Year)	1-10	11	24.4
	11-20	20	44.4
	21-30	4	8.9
	30 and above	10	22.2
Number of times Attending DLP courses	Never	7	15.6
	1 time	16	35.6
	2 times	10	22.2
	3 times and above	12	26.6

Research Instruments

The instrument used in this research is a questionnaire called Stage of Concern Questionnaire. A level of concern questionnaire (SoCQ) containing 35 questionnaire items related to seven stages of concern; adaptations from Hall and Hord (2014) were used in this study to survey teachers' stage of concern. Each statement in the questionnaire uses a Likert scale from 0 (Not Relevant) to 7 (Very True).

The questionnaire form was distributed through the Google Form application to facilitate the participants to answer the questionnaire (Rubananthan & Nurfaradilla, 2018).

According to Hall and Hord (2014), all 35 items in the level of concern questionnaire (SoCQ) have been in use since the 1970s. The instrument is reliable in its validity as it exhibits Cronbach's alpha validity from .64 to .83 and high coefficient test reliability from .65 to .86. Besides, a pilot study was conducted on 5 Science teachers (10 percents of the actual sampel size) in primary school in Pantu in Sri Aman district. The factor and reliability of this pilot study showed an alpha value of .82 (>.65). This shows that the questionnaire is a highly reliable instrument.

Methods of Data Analysis

Descriptive statistics is the method of data analysis used in this study. The *SoCQ Quick Scoring Device* of George et al (2006) was used as a guide to analyze descriptive data to form demographic group profiles as well as general profiles of teacher concerns. 5 items for each teacher's level of concern were summed to obtain the total raw score for each respondent. Then, the average raw score for each stage that has been generated will be converted to a percentage score using the *Concern Level Percentage Conversion Chart*. The steps will be repeated after all teachers are grouped according to demographic groups like age, academic qualifications, teaching experience and number of times attended DLP courses. Finally, percentage scores for general and demographic profiles will be plotted in the form of graphs.

Findings and Discussion of The Study

Profile of Teachers' Concern in term of Age

The percentage of concern intensity for all teacher age groups showed the highest score at the Not Relevant level (Stage 0). These four age groups also showed high percentages of concern intensity at the Self level (Stage 1 and Stage 2) and the Task level (Stage 3). However, all age categories showed different percentages of intensity at the Impact level (Stage 4). At the Collaboration (Stage 5) and Refocus (Stage 6) levels, the age groups of 50 years and above and ages between 20 and 29 years showed significantly different. Teachers in all groups showed the lowest concern intensity score at the Impact level i.e. Refocus (Stage 6) as shown in Figure 1. The percentage of concern in term of age is as shown in Table 3 below.

Table 3
Percentage of concern in term of age

Age Group (Years)	Stage 0	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
20 - 29	89	88	78	69	66	48	22
30 - 39	89	88	78	73	71	68	57
40 - 49	91	88	78	73	82	72	57
50 and above	91	90	83	73	90	84	73

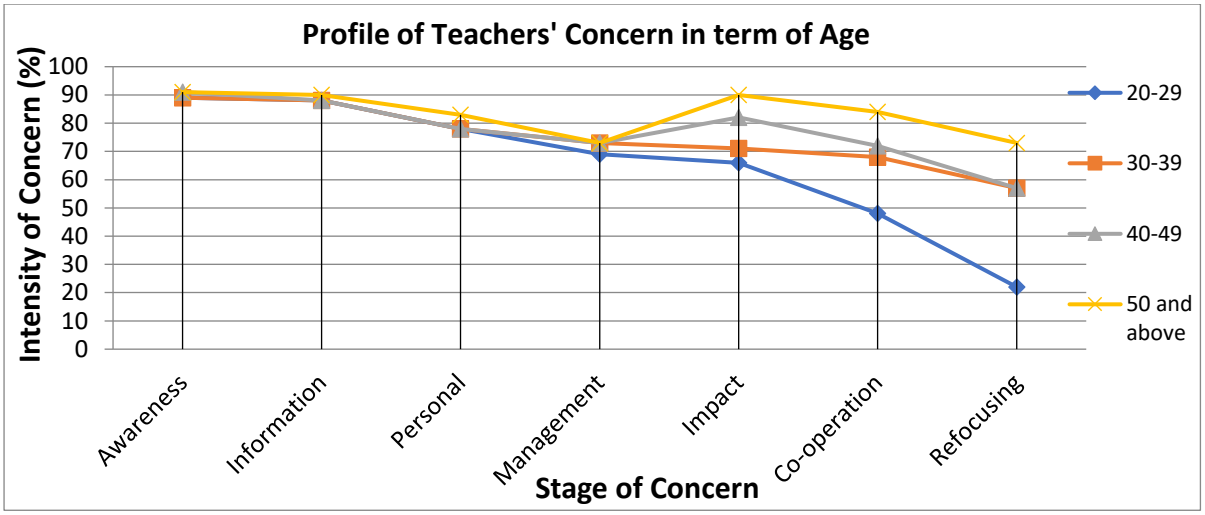

Figure 1: Profile of teacher's concern in term of age

The findings of the study showed that all age categories for Science teachers in Sri Aman district primary schools showed a non-user profile because teachers in all age categories exhibited a high percentage of concern at the Unrelated level (Stage 0), Self level (Stage 1 and Stage 2) and Task level (Stage 3) as well as the lowest intensity at the Impact level (Stage 6). Moreover, the 'tailing up' on the graph did not exist at Stage 6. Based on the CBAM interpretation, no 'tailing up' for the user profile meant that there was no teacher prejudice when conducting DLP. The results of this study are in contrast to Tan and Lee's (2015) study where 'tailing up' showed teachers' skepticism while implementing the new KSSR curriculum. Moreover, the findings of this study are also not in line with the study of Rubananthan and Nurfaradilla (2018) because their study also showed teachers' skepticism while implementing *i-Think.*

Teachers at all levels show a high concern in carrying out responsibilities regarding DLP which include the optimal use of information and resource and time management. The findings of this study are consistent with the study of Rubananthan and Nurfaradilla (2018) who stated that high concern in performing responsibilities regarding *i-Think* by managing teaching aids and time effectively by all age categories of teachers.

All age groups showed different concern scores at the Impact level (Stage 4). However, all four of these age groups showed high levels of Impact. Therefore, all age -group teachers focused on the impact of DLP on students in terms of assessment of student achievement and competence. This finding differs from the results of Tan and Lee's (2015) study where a group of teachers aged 20 to 29 years showed minimal concern about the relationship of the impact of KSSR innovation implementation with students.

Significant differences in the Impact level can be seen in the age group of 50 years and above and ages between 20 to 29 years, for cooperation (Stage 5) and Refocusing (Stage 6). Teachers in the age group of 50 years and above place great emphasis on collaboration with colleagues to improve the efficiency of DLP implementation. They are also committed to explore the benefits of DLP implementation and find other methods to improve on those innovations. On the other hand, teachers between the ages of 20 and 29 are less likely to collaborate with other teachers or their colleagues in addition to less thinking about the benefits of DLP or looking for alternatives to improve the effectiveness of DLP implementation.

Profile of Teachers' Concern in term of Academic Qualifications

The percentage of concern intensity for all groups of teachers' academic qualifications, namely non -graduates, graduates and advanced graduates showed that the Non-Relevant level (Stage 0) was the highest score. All three groups also exhibited high scores of concerns at Stage 1 and Stage 2 (Self level). However, teachers of the advanced graduate category also showed a high intensity of concern at the Impact level (Stage 4). All academic qualification categories showed different percentages of intensity at the Impact level i.e. Collaboration Level (Stage 5) where non -graduate teachers showed higher scores compared to the group of graduate and advanced graduate teachers.

Teachers of the graduate and advanced graduate qualification groups showed the lowest concern intensity scores at the Impact level of Refocus (Stage 6). While non -graduate teachers showed the lowest concern intensity score at the Task level which is Management Level (Stage 3) as shown in Table 4 below.

Table 4

Percentage of concern in term of academic qualification

Academic Qualification Group	Stage 0	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Not a Graduate	93	90	80	69	76	84	77
Graduate	89	88	78	73	76	68	52
Advanced Graduate	91	91	85	77	90	76	47

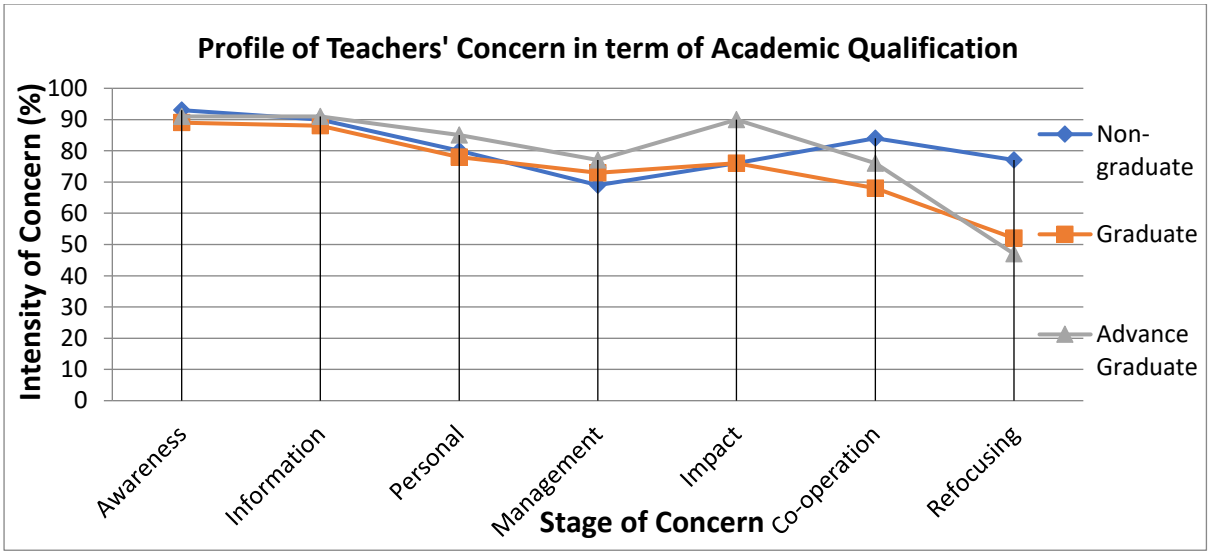

Figure 2: Profile of teacher's concern in term of academic qualification

Teachers in all academic qualifications were 'non-suspicious users' because the highest percentage of concern intensity was at the Unrelated level (Stage 0). Therefore, the second highest percentage should be examined to explain the user profile of innovation (George et al., 2013). The second highest percentage of all academic qualifications is indicated at the Self or Information Level (Stage 1). These findings indicate that all categories of teacher academic qualifications have a general awareness and are interested in learning more in depth about

the criteria, impact and requirements of DLP. In addition, advanced graduate qualified teachers emphasized the impact of DLP on student achievement and competence based on the high intensity of concern at the Impact level at the Impact Level (Stage 4). This finding is contrary to the findings in the study of Rubananthan and Nurfaradilla (2018) where they found that advanced graduate qualified teachers showed a high percentage of concern intensity at the Self and Management level.

All three categories of academic qualifications exhibit cooperative attitudes with colleagues at different levels. Non-graduate teachers place great importance on collaboration with other teachers to improve the efficiency of DLP implementation compared to graduate teachers and advanced graduate teachers. This finding is consistent with Norazila's (2008) study where she says that non -graduate teachers are concerned about the actions taken by colleagues and are highly cooperative with colleagues about the use of technology.

Teachers of the graduate and advanced graduate qualification groups were less concerned with exploring benefits or other methods to improve DLP based on the lowest concern intensity score at the Impact level i.e. Refocus (Stage 6). The lowest concern intensity score at the Task level i.e. Management Level (Stage 3) shown by non -graduate teachers showed that they pay less attention to DLP processes and tasks other than minimal use of information and resources and less attention to all DLP issues that arise.

Profile of Teachers' Level of Concern in the Implementation of DLP Based on Teaching Experience

The group of teachers with teaching experience of 1 - 10 years, 11 - 20 years and 31 years and above exhibited the highest percentage of concern intensity at the Non-Relevant level which is the Awareness level (Stage 0). The category of teachers with 21-30 years of teaching experience recorded the highest percentage of concern intensity at the level of Not Relevant or Awareness (Stage 0) and the Self level which is the Information (Stage 1). The three groups of teachers with 1 -10 years, 11 -20 years and 21 -30 years of experience showed the lowest percentage of concern intensity at the Impact level i.e. the Refocus (Stage 6). The category of teachers with teaching experience of 31 years and above exhibited the lowest percentage of concern intensity at the Task level i.e. Management (Stage 3). The overall concern intensity scores for all teaching experience groups are shown in Table 5 below.

Table 5
Percentage of concern in term of teaching experience

Teaching Experience Group (Years)	Stage 0	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
1 - 10	91	90	78	73	63	55	34
11 - 20	89	88	78	69	76	68	57
21 -30	91	91	78	73	90	76	52
31 and above	91	90	85	73	90	88	77

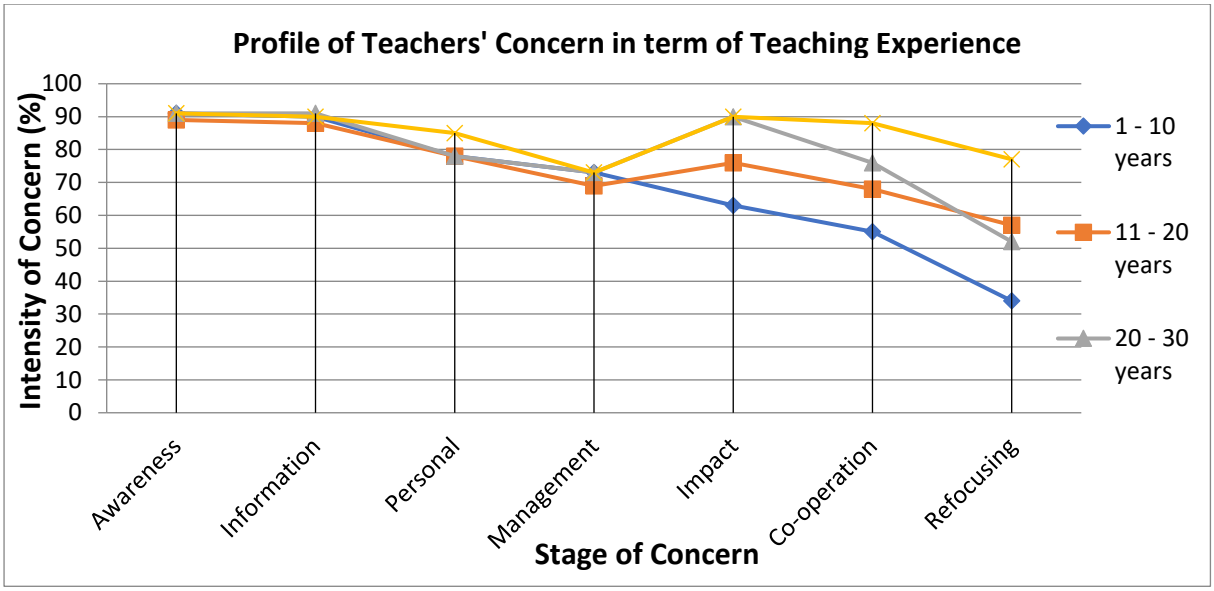

Figure 3: Profile of teacher's concern in term of teaching experience

Three groups of teachers' teaching experience, namely teachers with 1 to 10 years of experience, 11 to 20 years and 31 years and above showed a form of 'non-user' profile according to the explanation of George et al (2006) because the group showed the highest intensity at Stage 0. Therefore, he suggested that the second highest percentage to describe the user profile of innovation should be considered. Thus, all these groups of teachers, including the group of teachers with 21-30 years of teaching experience, exhibited the second highest percentage of intensity at the Information stage (Stage 1) which means that these teachers expect more information related to DLP activities in schools. These findings are inconsistent with the findings of Tan and Lee (2015); Haugen (2008) that all teaching experience groups in their study exhibited high intensity for Stage 0 and Stage 3.

The lowest intensity at the Impact level which is the Refocus stage (Stage 6) is exhibited by the category of teachers with teaching experience 1 to 10 years, 11 to 20 years and 21 to 30 years. According to Hall and Hord's (2011) interpretation, teachers in this group are less concerned about merits and less effort to find appropriate methods to improve the effectiveness of DLP. Meanwhile, the group of teachers with teaching experience 31 years and above showed the lowest percentage of concern intensity at the Task level which is Management stage (Stage 3). This means that teachers in this group have low concern about time, logistics or management problems related to DLP implementation. This finding is not consistent with the results of Tan and Lee (2015) study's which showed that the group of teachers with teaching experience of 31 years and above exhibited the lowest intensity of concern at the Impact level at the Collaboration stage (Stage 5) which means these teachers are less collaborative with colleagues to improve the efficiency of the implementation of the Primary School Standard Curriculum (KSSR) innovation.

Profile of Teachers' Concern in term of Number of Times Attended DLP Courses

Profiles for the category of teachers who never attended a DLP course and the group of teachers who attended twice DLP courses showed the highest percentage score for Level 1 and decreased percentage intensity for each subsequent level where Level 6 exhibited the lowest percentage of concern intensity. However, teachers who attended twice of DLP courses also showed the lowest intensity of concern at Level 3

The group of teachers who attended once DLP course and three times and above showed the highest intensity of concern at Level 0 and decreased for each subsequent level. Accordingly, the lowest intensity of concern for this category was Level 6. The overall score of intensity of concern for all groups number of times attended DLP course is shown in Table 6 below.

Table 6
Profile of teacher's concern in term of number of times attending DLP courses

Group Attended DLP Courses (Times)	Stage 0	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Never	93	95	89	83	76	64	47
1	77	60	55	43	30	36	26
2	86	90	80	65	86	76	65
3 and above	89	80	72	65	71	68	57

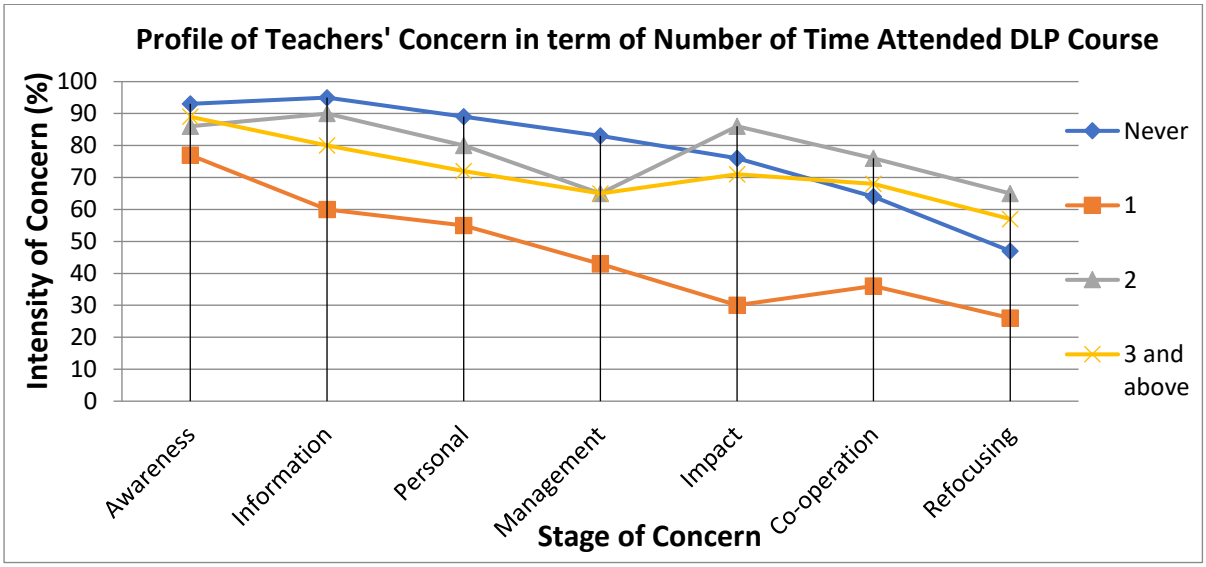

Figure 4: Profile of teacher's concern in term of number of times attended DLP Courses

The results of teacher concern intensity analysis based on the number of times attended DLP courses showed that teachers who attended once and 3 times and above formed a 'non-user' profile according to the interpretation of (George et al., 2006). They exhibited the highest intensity of concern at the Not Applicable level i.e. the Awareness Level. This reflects that teachers who attended DLP courses for once and 3 times and above were aware of the existence of DLP but were less interested in its implementation. Scores in Stage 0 for non -user profiles were less important compared to variations of Stage 1 and Stage 2 scores (George et al., 2006). Therefore, Stage 1 should be noted since the Self or Information stage is the second highest intensity score. This means that teachers of this group have a general awareness of DLP and are interested in learning about it in more depth (Hall & Hord, 2011). The situation was similar for the group of teachers who had never attended the DLP course and the group of teachers who attended it 2 times because these two groups also showed the highest percentage of concern intensity at the Self level especially at the Information Stage (Stage 1).

Teachers from all groups showed the lowest level of concern at the Impact level especially the Refocus stage (Stage 6). The results of this analysis illustrate that the group teachers think less or care less about exploring benefits or finding other ways to increase the effectiveness of DLP (Hall & Hord, 2011). Furthermore, the group of teachers who attended DLP courses 2 times exhibited the results of the lowest concern intensity analysis at the Task level i.e. Management Stage (Stage 3) This analysis reflects that the teachers from the group are less focused on DLP-related management, apart from using the available resources minimally.

General Profile of Teachers' Concern

Overall, teachers showed the highest level of concern at the Unrelated level with a concern intensity score of 90%. Teachers also exhibited a high intensity of concern at the Self level (Stage 1 and Stage 2). On the other hand, teachers showed the lowest concern intensity score at the Impact level especially the Refocus Stage (Stage 6) which was 54%. Overall, the graph for teachers' level of concern shows a downward trend from Stage 0 to Stage 6 except at Stage 4 as shown in Figure 5.

The analysis of the study showed a high percentage of concern intensity at the Not Applicable Stage (Stage 0) for the general profile of DLP implementation. This illustrates the implementation of DLP is not a priority of teachers because there are other matters and responsibilities that are considered more important in schools that are constraints in teacher involvement towards DLP (Rubananthan & Nurfaradilla, 2018). Teachers should accept the innovations introduced through a committed attitude, willing to engage, responsible and interested in those innovations (Breiting, 2008; Sanchez-Mena et al., 2017).

In this study, teachers were found to have a general awareness of DLP and showed interest in learning more in depth about its characteristics, effects and needs. This finding is based on the second highest concern intensity score which is at the Self level especially the Information Stage (Stage 1). According to Kirkland and Sutch (2009), teachers feel apprehensive and anxious to implement a curriculum innovation due to lack of information and vague objectives about the standard operating procedures (SOP) of the implementation of a reform.

Meanwhile, the analysis of the study showed the lowest concern intensity score at the Refocus Stage reflecting that teachers were less interested in figuring out the benefits and methods to improve the effectiveness of DLP.

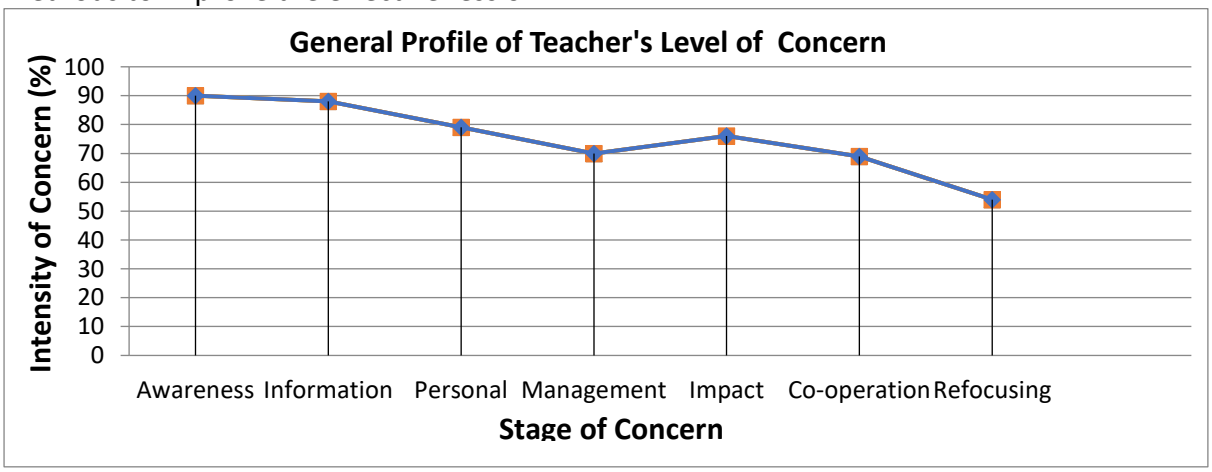

Figure 5: General profile of teacher's concern

Conclusion

This study shows that the general profile of the level of concern of Science teachers in Sri Aman District, Sarawak towards DLP innovation as non-user. They need more information so that the implementation of DLP can be carried out effectively. This is because the implementation of innovation is a process rather than an event (Hall and Hord, 2001). Accordingly, the provision of various information on DLP and ongoing monitoring and guidance should be given to such teachers (Rubananthan and Nurfaradilla, 2018). They also suggested that guidance and monitoring by officers from the Ministry of Education Malaysia, State Education Department and District Education Office should be done to avoid teachers in doubt and carry out the innovation according to their own understanding.

An important finding in this study was about the 'tailing down' on the graph for all respondent demographics including general profiles. This gives the impression that teachers do not have their own opinions or views on a better way to replace DLP and do not want to change the innovations that have been implemented in schools. These findings are inconsistent with the results of previous studies by Rubananthan and Nurfaradilla (2018), and Tan and Lee (2015) which showed the presence of a 'tailing up' at Stage 6 (Refocus) in the general concern level profile graph. However, they should be aware of the benefits of DLP which aims to empower English among students.

In addition, these teachers pay less attention to the process and planning of DLP implementation in the teaching and learning of Science. Furthermore, they are less concerned about any DLP issues that arise. This matter should be taken seriously by the stakeholders to ensure the effectiveness of DLP which is expected to increase the level of English proficiency as well as improve the achievement of Science and Mathematics among students. The findings of this study can be used as a reference for the stakeholders and the future researchers to overcome all problems that arise related to DLP innovation in the district of Sri Aman in particular and the whole country in general.

As a conclusion, the findings of the study found both types of profiles; general and demographic, showed high concern for awareness (Stage 0), information (Stage 1) and personal (Stage 2), whereas, low concern intensity scores for collaboration (Stage 5) and refocusing (Stage 6). Such concern level profiles reflect that teachers show little involvement with, general awareness of, and uncertain feeling towards the DLP.

As the suggestions, a study or research on the implementation of DLP in the teaching and learning of Mathematics in primary schools in Sri Aman District should be conducted to identify the level of concern of Mathematics teachers towards this innovation. Besides, the same research should be carried out in order to get information on teachers' level of concern towards DLP in other districts in Sarawak, Malaysia.

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