
EFFECTIVENESS OF BLOCK SCHEDULING (BSS) VIS-À-VIS THE PAULINIAN REMOTE FLEXIBLE LEARNING EXPERIENCE (REFLEX) SCHEME IN ST. PAUL UNIVERSITY SURIGAO

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Abstract— This descriptive quantitative research determined the effectiveness of the Block Scheduling Scheme (BSS) vis-à-vis the Paulinian Remote Flexible Learning Experience (ReFLEx) scheme in St. Paul University Surigao as perceived by the college students during the academic year 2022-2023. Validated researcher-made questionnaires were administered to the 322 college students at St. Paul University Surigao who were randomly selected. Then, the Frequency Count and Percentage Distribution, Mean & Standard Deviation, Kruskal-Wallis H-test, and Mann-Whitney U-test were all employed in order to analyze the gathered data. Findings revealed that the most valuable contributors to this study were mostly 20–21 years old and were females. As to the effectiveness, the college students deemed described that the block scheduling scheme of the University vis-à-vis the Paulinian ReFLEx is highly effective with respect to the assessment of learning station, while moderately effective with respect to the independent, collaborative, and interactive teacher-directed learning stations. In relation, the indicators of the effectiveness of the BSS therefore have positively influenced the students' learning experiences at St. Paul University Surigao. Moving further, there were significant differences in the college students' perceptions of the effectiveness of BSS with respect to their college departments vis-à-vis the independent, collaborative, and interactive teacher-directed learning stations under the ReFLEx modality. Also, there was a significant difference in the college students' perceptions of the effectiveness of the BSS with respect to sex vis-à-vis the assessment of learning station under the ReFLEx modality. In the end, the college students insinuated that BSS is deemed effective in enhancing student engagement, promoting in-depth learning, and facilitating greater independent learning, interactive teacher-directed learning, and collaboration among students. Given these significant results, the Paulinian institution should look into how to close the gaps identified in the study and further improve the implementation of the BSS vis-à-vis ReFLEx with respect to the independent, collaborative, and interactive teacher-directed learning stations to become highly effective. Moreover, the institution should continue regularly evaluating the effectiveness of BSS vis-à-vis the Paulinian ReFLEx to consistently determine the achievement of learning outcomes through the implementation of BSS with ReFLEx.

Keywords – Block scheduling scheme, Paulinian ReFLEx, Independent learning, Collaborative learning, Interactive Teacher-Directed Learning, Assessment of Learning, Descriptive Quantitative Design, Philippines

I. INTRODUCTION

A schedule creates order from chaos and, perhaps, plans from purpose. It's no surprise that some people regard the timetable with awe, almost veneration. Unfortunately, fear and caution frequently force schools to create schedules that hinder rather than aid education. Some people claim that the typical schedule is ineffective, so administrators and educators are looking at new scheduling choices (Carroll, 1990; Marshak, 1997; Rettig & Canady, 2001). The careful preparation and micro-planning of teaching with the student at the center is essential for effective and efficient teaching and learning. This entails selecting efficient teaching strategies and educational activities to produce positive learning results, as well as modifying evaluation methodologies to judge those outcomes. Since we are now in a modern world where the use of technology plays a vital role in society. In the educational sector, technology is becoming increasingly crucial. One of its products is the blocking schedule. Block scheduling is a kind of class scheduling that has longer hours but fewer sessions per week. Since its usefulness in raising students' academic achievement has been documented in the literature, students may concentrate on fewer courses each day.

Effective block classroom instruction requires that teachers have a voice in the decision to implement a block schedule. Teachers need to show that they can properly align and pace their lessons, preferably within the school environment and by content area. The majority of the study says that block scheduling can help with a variety of problems, including student absences, instructor burnout, student-teacher relationships, and the availability of off-campus internships and job shadowing. However, the critical issue is what it does for actual learning.

Block scheduling is a method of creating student timetables in the classroom. It means that students will have fewer courses each day, but they will rotate across disciplines. Block scheduling has been around for the greater part of 30 years, mostly to give students more time to study subjects in depth. According to critics, block scheduling has many advantages over the usual 6-period, 55-minute class plan (as in the case of many schools in common). The use of time is one of the most prominent benefits of a 4x4 block schedule with four 90-minute class periods each day (Slattery, 1995). Thus, many institutions have changed from traditional scheduling methods to block scheduling, with strong voices on both sides (Canady & Rettig, 1995; Lindsay, 2000).

The Copernican Pilot Program, the first attempt at block scheduling, was launched in 1989 at Masconomet Regional High School in Boxford, Massachusetts. John Carroll saw the bell schedule as a tool for potential and good change in school districts. He thought the regular high school timetable of 45-minute intervals with eight classes per day was inefficient. To solve this inefficiency, Carroll devised the Copernican Plan, a timetable with fewer and longer intervals every day. This strategy enables students to take fewer classes per day while decreasing student movement on campus and boosting instructional time (Carroll, 1990). After two years, it was clear that the Copernican Plan was preferred by students, instructors, and parents over the usual schedule. As a result, other researchers observed that schools were not making the best use of classroom time. Some of these studies estimated that up to 16% of each school day is lost, while others said that only 30–40% of the average school day is spent on academics (Nichols, 2005, p. 299).

Furthermore, research on the impact of blocking schedules was undertaken at De La Salle University in Manila, Philippines. Block scheduling is used to teach physics in college, so students only see their lecturers once or twice each week (two or three hours per meeting). Although there are fewer meetings than on a regular timetable, students have longer class sessions. There are instances of instructors complaining that the 60 minutes allotted for the class were insufficient to cover the topic or topics planned for the day. Or, it's very hard to complete outdoor activities or lab experiments in a single meeting. Lectures, outdoor activities, and lab experiments are often carried over to the following meeting. Problems occur when students misplace their experiment papers or fail to bring back the necessary supplies for the experiment. Moreover, due to illness or other obligations related to their studies, students might not be able to attend the next session. Considering this, it is thought that implementing a block schedule for college students will provide them with the extra time they require for each activity, whether it be in a lecture or a laboratory. These students undergo a critical developmental and transitional phase, responding to their physical changes and social, self-confidence, and cognitive challenges. The blocking system helps the student's learning because it only focuses on a specific

subject. It enables students to focus more and do their best because they are not pressured to take more subjects. On the other hand, while many beneficial outcomes have been reported by teachers, students, and schools that have used a block schedule, several concerns or negative effects have also emerged. The success of the block schedule depends on continuous revision and improvement.

Educators have been experimenting with changes to the school day schedule for over a century. Block scheduling, which organizes the school day into larger blocks of time, gained popularity in the 1990s due to its flexibility and potential benefits. Research showed that block scheduling could improve student achievement and school climate. As a result, about half of all high schools in the United States had adopted some form of block scheduling by 2001. Advantages of block scheduling include reduced administrative time, increased continuity in lessons, and a focus on fewer courses at a time. It also provides additional planning time for teachers and can reduce student stress and anxiety. The availability of more course options is another benefit. However, there are debates about the effectiveness of block scheduling, with some arguing that teacher training and instructional diversity are crucial factors in its success. The lack of variety in teaching styles and an overreliance on lectures have been cited as drawbacks of block scheduling. Some argue that instructional time is lost due to these issues. However, proponents of block scheduling claim that it allows for a variety of instructional strategies and improved instruction, leading to better student learning. While block scheduling has its advantages, critics argue that it can be challenging for students due to the fast pace and lack of consistency. Proper implementation is necessary to address concerns about learning depth and consistency in instruction.

In the context of St. Paul University Surigao, the Block Scheduling Scheme (BSS) was implemented to respond to the demands of the educational philosophy brought by the concept of Outcome-based Education. For SPU Surigao, BSS is also called an “alternative scheduling model” where it involves blocks of time for student learning by restructuring the school day. Block schedules are made up of fewer but longer periods. The classes meet either fewer days a week or for less than a semester. In the case of the Paulinian institution, students have fewer classes to attend, and the teachers have fewer students to deal with and fewer preparations to work on. Because of the extended contact hours of the model, block classes require innovative approaches. Accordingly, the benefits of this mode for teachers can be categorized into two: (1) organization of the school day and (2) delivery of instruction.

For SPU Surigao, BSS is an innovation aimed at improving classroom instruction; creating a more productive learning environment through an intimate and student-centered learning atmosphere. The process allows students to learn in-depth the concepts and skills inherent in the lesson. For example, a 3-unit course is normally required to have a 54 to 56-hour-long contact for teaching-learning engagements per semester, as recommended by the Commission on Higher Education or CHED. In BSS, instead of spreading the subject over the entire semester, it can be only implemented within 16 to 22 contact days with 2.5 to 3.5-hour long daily sessions or classes.

For many years now, SPU Surigao has been consistent in implementing the BSS continuing a more efficient teaching-learning delivery and educational services for the Paulinians. Now, with the new challenges brought by the pandemic, the Paulinian ReFLEx program has also been introduced at SPU Surigao to provide flexible distance learning options. It includes different learning stations, such as *independent learning*, *collaborative learning*, *interactive teacher-directed learning*, and *assessment of learning* stations, in order to balance independence and collaboration in instruction and learning. Additionally, the university utilizes a Learning Management System provided by Quipper to support this educational approach. It is believed by the university that with the BSS, added with the ReFLEx scheme, and the efficient implementation and use of the LMS, SPU Surigao becomes highly effective in its educational services delivery and in providing meaningful learning experiences to students despite the challenges of education today.

St. Paul University Surigao has employed the block scheduling scheme (BSS) since 2015. There were surveys made related to its implementation, but the researchers are interested to know the perception of the college Paulinian students as regards the effectiveness of block scheduling in the learning of the students. According to Gaille (2018), one of the disadvantages of block scheduling was that it had the potential to speed up the class process but the time had come when students neglect what they had learned. Because of the time controls, it was impossible for them to deny that any lesson was dropped for compliance. In addition,

according to Montanilla (2021), there were still identified issues or concerns, and a need to anticipate or commit to the Classroom Engagement and Instructional Preparation in blocking system.

In this study, the researchers sought to reveal the perceptions of the college students on the effectiveness of the block scheduling scheme vis-à-vis Paulinian ReFLEx at St. Paul University Surigao. The results of this study would help the teachers and the school administrators improve the implementation of the block scheduling scheme for the benefit of the whole school community and for the sake of outcome-based learning.

II. METHODS

In this study, the researchers used a quantitative research approach that applies a descriptive research survey design. This design enabled the researchers to collect more precise and quantifiable information necessary to quantify responses that led to expected research outcomes with identified appropriate indicators. According to Surendran (2019), a quantitative research design systematically investigates a phenomenon using quantifiable data collection, statistical analysis, and computational techniques. Furthermore, this design is appropriate to investigate the various perceptions of college students regarding the effectiveness of the block scheduling scheme vis-à-vis the Paulinian ReFLEx.

The participants of this study were 322 college students from St Paul University Surigao during the academic year 2022-2023. The stratified random sampling technique was employed for the selection of the participants and so there were 101 respondents coming from the College of Health Sciences, 92 from College of Business and Technology, 61 from the College of Engineering, 51 from the College of Education, Culture, and Arts, and 17 from the College of Criminal Justice Education.

In gathering the data for this study, a researcher-made questionnaire was employed. The questionnaires consist of three parts: Part I gathered the profiles of the participants; Part II gathered the students' perceptions about the effectiveness of the block scheduling scheme vis-à-vis the Paulinian ReFLEx at St. Paul University Surigao. Meanwhile, at the end of every indicator, a portion is allotted for additional comments by the participants, which will be used to support the discussion of the results of the study. The researchers sought experts' critiquing to validate the content of the instrument.

The Frequency Count and Percentage Distribution, Mean & Standard Deviation, Kruskal-Wallis H-test, and Mann-Whitney U-test were all employed in order to analyze the gathered data.

Ethics in the conduct of this research were strongly considered for the academic integrity of this study. Ethical research practices in educational institutions are strongly followed since it is always the goal of educational research to contribute to the general welfare of the academic community and to generally create measurable information or data that will eventually add to the increase of human knowledge (Ederio, et.al., 2023) such as the essence depicted by this study.

III. RESULTS AND DISCUSSION

I – Profile of the Participants

Table 4 presents the demographic profile of the respondents as to age, sex, department, and year level.

TABLE 1
DEMOGRAPHIC PROFILE OF THE RESPONDENTS

Variables	f (322)	%	
Age	18-19	65	20%
	20-21	155	48%
	22-25	102	32%
Sex	Male	141	44%
	Female	181	56%
Department	College of Education Culture and Arts	51	16%
	College of Business and Technology	92	29%
	College of Criminal Justice Education	17	5%
	College of Engineering	61	19%
	College of Health Sciences	101	31%

Year Level			
1 st year	78	24%	
2 nd year	77	24%	
3 rd year	97	30%	
4 th year	70	22%	

The respondents' age distribution indicates a diverse range, with three distinct *age* groups being represented. The majority of participants, constituting 155 or 48% of the total sample, fall within the 20-21 age bracket. This is followed by 102 or 32% of the participants who age 22-25 years old. The remaining 20% are between the ages of 18-19 years old.

In terms of *sex*, out of 322 respondents, there are 181 or 56% females and 141 or 44% males. Moreover, the College of Education Health Sciences has the highest number of respondents with 101 students or 31%. Following that, the College of Business and Technology accounts for 92 participants or 29%, 61 or 19% are from the College of Engineering, and 51 or 16% come from the College of Education, Culture, and Arts. The College of Criminal Justice Education has the lowest representation, with only 17 or 5% of the respondents coming from this college.

Meanwhile, as to the *year level*, most of the participants are 3rd year students, comprising 97 or 30% of the participants. The 1st and 2nd years almost have a similar number of student participants, with 78 or 24% and 77 or 24%, respectively. Only 70 or 22% 4th year students participated.

II – Level of Perceived Effectiveness of Block Scheduling Vis-À-Vis Paulinian ReFLEx in St. Paul University Surigao

TABLE 2
LEVEL OF PERCEIVED EFFECTIVENESS OF BLOCK SCHEDULING IN TERMS OF INDEPENDENT LEARNING

Independent Learning		M	SD	VI	QD	
The block scheduling scheme ...						
1	allows for more autonomy in learning.	3.16	0.60	A	ME	
2	allows learners to assess and measure on what they want to achieve in their course.	3.19	0.64	A	ME	
3	helps learners reflect and monitor their progress in connection with their learning goals.	3.18	0.66	A	ME	
4	helps learners to point out and accurately understand their academic strengths and weaknesses	3.18	0.72	A	ME	
5	allows learners to be more creative with their work, for example, in direct assessment such as portfolios, performances, etc.	3.20	0.72	A	ME	
6	allows the learner to monitor and assess performance in all learning activities.	3.20	0.72	A	ME	
7	provides enough chances to accomplish all the requirements such as assignment, portfolios, and projects.	3.15	0.79	A	ME	
		Average	3.20	0.93	A	ME

Legend:

Parameter	Verbal Interpretation	Qualitative Description
3.25 - 4.00	Strongly Agree (SA)	Highly Effective (HE)
2.50 - 3.24	Agree (A)	Moderately Effective (ME)
1.75 - 2.49	Slightly Agree (SIA)	Slightly Effective (SE)
1.00 - 1.74	Disagree (D)	Not Effective (NE)

As shown in Table 2, the indicator, “The block scheduling scheme allows learners to be more creative with their work, for example, in the direct assessment such as portfolios, performances, etc.,” got the highest mean rating ($M=3.20$, $SD=0.72$) and is verbally interpreted as *Agree* with a qualitative description of *Moderately Effective*. This means that because students are focused, they can showcase their creativity and abilities through alternative assessment methods. The block schedule provides opportunities for more meaningful learning experiences with less stress on the students and those who need more individualized help (Dorwin, 2009; Kaya & Aksu, 2016; Roberts, 2016). On the other hand, Foster and Shamir (2018) opposed the statements of Gapanchi (2022) saying, because of the shorter duration, blocks tend to be more intense, and this can create a sense of being rushed resulting in poor performance, hence, they believed that the impact of

extended class periods on student creativity. Furthermore, the study by Foster and Shamir (2018) found that longer class periods provided students with more uninterrupted time to engage in open-ended tasks and creative projects. This allowed for greater exploration, brainstorming, and experimentation, leading to more creative and innovative outputs.

In addition, the indicator, “*The block scheduling scheme allows the learners to monitor and assess performance in all learning activities.*” also got the highest mean ($M=3.20$, $SD=0.72$), and was verbally interpreted as *Agree* with the qualitative description of *Moderately Effective*. This indicates that learners can actively evaluate their performance across various learning tasks because they have a longer time in doing independent learning and assess their personal progress. In support, Baghaei and Ebrahimi (2019), examined the impact of extended class periods on student self-assessment and performance in a language learning context. The findings revealed that longer class periods provided students with more time for reflection, self-assessment, and goal setting, leading to improved learning outcomes and higher levels of academic achievement.

On the other hand, the indicator, “*The block scheduling scheme provides enough chances to accomplish all the requirements such as assignment, portfolios, and projects.*”, got the lowest mean ($M=3.15$, $SD=0.79$), and was verbally interpreted as *Agree* with a qualitative of *Moderately Effective*. Despite being the lowest indicator, it still yielded a highly valued description, which means that learners have adequate opportunities to complete the necessary tasks and demonstrate their learning during the given 3.5 hours. However, considering the number of days which is only 16 days students may find it too short for them to accomplish a more meaningful output. This is supported by the study conducted by Chen and Wu (2019), researchers examined the relationship between class period length and student task completion. The results suggested that longer class periods allowed students to manage their time more efficiently, allocate dedicated blocks for assignment and project work, and meet the requirements within the given time frame. In fact, a large body of research shows that students can make wise choices when they self-pace the study of to-be-learned materials and then allocate study time to each item (Bjork et al., 2013, p. 425).

On average, the *Level of Perceived Effectiveness of Block Scheduling* in terms of *Independent Learning* got the mean of $M=3.20$, $SD=0.79$ with a qualitative description of *Moderately Effective*. Children that are independent possess greater self-confidence and motivation, and their actions are not dependent on anybody else. Van Merrinboer and Sluijsmans International Electronic Journal of Elementary Education Vol.8, Issue 3, 507-524, 2016 512 (2009) concluded that instruction that provides a solid foundation for self-directed learning includes three components: learners must (a) perform the tasks, (b) evaluate their task performance, and (c) select future tasks for improving their performance.

Independent learning is acknowledged as a significant indicator of academic desire and accomplishment among pupils. It is a central concept in modern descriptions of effective academic learning. Students' acquisition of academic knowledge is directed by a learning process that requires independent study (Winne, 1995). Independent learning, according to Schunk (2005), is a state or condition in which students pursue learning activities without relying on others; this state or condition is always consistent, and self-directed learners are motivated to study anyplace. Independent learning is primarily driven by the student's initiative, choice, and responsibility for self-learning.

TABLE 3
LEVEL OF PERCEIVED EFFECTIVENESS OF BLOCK SCHEDULING IN TERMS OF COLLABORATIVE LEARNING

Collaborative Learning		M	SD	VI	QD
The block scheduling scheme ...					
1	enables learners to engage in longer discussions and listen to each member's viewpoint.	3.17	0.72	A	ME
2	allows for more cooperation because of longer contact hours	3.17	0.73	A	ME
3	enables the group to assess each other's work to produce a more collaborative output.	3.16	0.69	A	ME
4	allows enough time for learners to determine about what types of roles they are naturally great at taking on, along with roles upon which they could improve.	3.19	0.69	A	ME
5	enables the learners to recognize and have the time to adjust their self with the differences (such as personalities, behaviour, etc.) of their group mates.	3.20	0.69	A	ME

6	enables students to collaborate toward a common goal, explore diverse ideas or information, and still complete the task on time.	3.19	0.68	A	ME
7	allows the learners to enough time to apply their learning to a real-world setting and discover how the concepts relate to their project.	3.17	0.70	A	ME
Average		3.18	0.71	A	ME

Legend:

Parameter	Verbal Interpretation	Qualitative Description
3.25 - 4.00	Strongly Agree (SA)	Highly Effective (HE)
2.50 - 3.24	Agree (A)	Moderately Effective (ME)
1.75 - 2.49	Slightly Agree (SlA)	Slightly Effective (SE)
1.00 - 1.74	Disagree (D)	Not Effective (NE)

It can be gleaned in Table 3, that the indicator, “*The block scheduling scheme allows enough time for learners to determine about what types of roles they are naturally great at taking on, along with roles upon which they could improve.*”, got the highest mean ($\bar{M}=3.20$, $SD=0.69$), and was verbally interpreted as *Agree* with a qualitative description of *Moderately Effective*. This means that the time duration of block scheduling provides learners with ample time to explore different roles within the collaborative group, enabling them to identify their strengths and weaknesses and make necessary improvements. According to Johnson and Johnson (2019), the relationship between class period length and student role development in cooperative learning settings. The results suggested that longer class periods allowed students to experience various roles multiple times, providing opportunities to understand their natural inclinations and areas for growth in different team roles. Additionally, Liu and Yu (2018) examined the impact of extended class periods on student self-awareness and role exploration in a team-based learning context. The findings revealed that longer class periods provided students with more time to actively participate in group activities, reflect on their individual strengths, and identify areas for improvement in different roles within the team.

However, the indicator, “*The block scheduling scheme enables the group to assess each other’s work to produce a more collaborative output.*”, got the lowest mean ($\bar{M}=3.16$, $SD=0.72$), and verbally interpreted as *Agree* with qualitative of *Moderately Agree*. Despite being the lowest indicator, it still yielded a highly valued description. Meaning, with longer periods of contact time, learners have increased opportunities to cooperate and work together on tasks, projects, or assignments. Marra and Jonassen (2018) explored the advantages of extended class periods for collaborative problem-solving and peer assessment in a technology-enhanced learning environment. The findings revealed that longer class periods provided students with more time for collaboration, reflection, and the evaluation of each other’s work, leading to more comprehensive and collaborative outputs.

On average, the *Level of Perceived Effectiveness of Block Scheduling* in terms of *Collaborative Learning* got the overall mean of $\bar{M}=3.18$, $SD=0.71$ with a qualitative description of *Moderately Effective*. Many instructors from disciplines across the university use group work to enhance their students’ learning. Whether the goal is to increase student understanding of content, to build transferable skills or some combination of the two, instructors often turn to small group work to capitalize on the benefits of peer-to-peer instruction. This type of group work is formally termed cooperative learning and is defined as the instructional use of small groups to promote students working together to maximize their own and each other’s learning (Johnson, et al., 2008). According to Brame and Biel (2015), longer class periods provide students with more time to engage in hands-on activities, projects, or simulations that require the application of their learning to real-world situations. This extended time allows them to delve deeper into the subject matter and gain a better understanding of how concepts and theories are relevant in practical contexts.

TABLE 4
LEVEL OF PERCEIVED EFFECTIVENESS OF BLOCK SCHEDULING IN TERMS OF INTERACTIVE TEACHER-DIRECTED LEARNING

Interactive Teacher-Directed Learning		M	SD	VI	QD
The block scheduling scheme ...					
1	allows sufficient time to integrate the old knowledge from the previous lesson with the new information.	3.17	0.65	A	ME
2	allows longer intelligent brainstorming sessions by teachers.	3.21	0.71	A	ME

3	allows more opportunities for every student in the class to participate in the discussion.	3.23	0.67	A	ME
4	enables the teacher to be more receptive to questions which increases the learners' engagement and learning outcomes.	3.18	0.69	A	ME
5	allows more ability to cater the learners' needs	3.18	0.69	A	ME
6	allows the learners to ask clarifying questions that deepen their knowledge about the topic due to the longer hour.	3.18	0.70	A	ME
7	helps the learners to generate more responses to the teachers' queries or understanding about the lessons being discussed.	3.20	0.66	A	ME
8	provides chances to the learners to process the lessons that the teacher discussed on the same session due to the longer hour.	3.18	0.70	A	ME
9	allows the class to be informed about their requirements, such as when a teacher reminds the class of the portfolio they need to submit on a specific date or deadline.	3.21	0.67	A	ME
10	enables the learners' to be more flexible and responsive in any learning activities.	3.18	0.69	A	ME
11	allows the learners to become more engaged and interactive by having fun but educational activities like role-play, puzzles or showing a documentary.	3.23	0.70	A	ME
Average		3.20	0.69	A	ME

Legend:

Parameter	Verbal Interpretation	Qualitative Description
3.25 - 4.00	Strongly Agree (SA)	Highly Effective (HE)
2.50 - 3.24	Agree (A)	Moderately Effective (ME)
1.75 - 2.49	Slightly Agree (SlA)	Slightly Effective (SE)
1.00 - 1.74	Disagree (D)	Not Effective (NE)

As shown in Table 4, the indicator “The block scheduling scheme allows learners to become more engaged and interactive by having fun but educational activities like roleplay, puzzles or showing a documentary”, got the highest mean ($\bar{M} = 3.23$, $SD = 0.70$), and was interpreted as Agree with a qualitative description of Moderately Effective. This means that longer class periods provide opportunities for creative and enjoyable learning experiences. According to Ferri, Grifoni, and Guzzo (2020), when longer class times are added, students can thoroughly engage with the interactive learning material provided by their teachers. This can increase levels of engagement, retention, and comprehension. In a nutshell, students can develop a deeper understanding of the material through interactive teacher-directed learning with longer class times and by collaborating with a teacher who can offer guidance and feedback. This can help them apply their knowledge to real-world scenarios and make connections between various ideas connections between different ideas and concepts.

In addition, the indicator “The block scheduling scheme allows more opportunities for every student in the class to participate in discussion.”, also got the highest mean ($\bar{M} = 3.23$, $SD = 0.67$), and was interpreted as Agree with a qualitative description of Moderately Effective. Meaning, with longer class periods, there are more opportunities for every student in the class to participate in discussions that promote increased student engagement and participation. According to Bethal High School, Virginia, and Morris RC (2022), block scheduling provides increased opportunities for student learning and success. With longer class periods, teachers have more time to engage students in discussions, group work, and other activities that require active participation. Students also have more time to ask questions, share their opinions, and contribute to class discussions.

However, the indicator, “The block scheduling scheme allows sufficient time to integrate the old knowledge from the previous lesson with new information”, got the lowest mean ($\bar{M} = 3.17$, $SD = 0.65$), and was interpreted as Agree with a qualitative description of Moderately Effective. Despite being the lowest indicator, it still yielded a moderately valued description. This means that the integration of the previous knowledge during

the interactive teacher-directed station may be lacking hence, during this station the teacher will do the deepening of the topic. However, considering the 3.5 hours spent by the teacher it could also be considered a long time the longer class periods in the block scheduling scheme provide enough time for teachers to connect previously learned knowledge with new information. The majority of experts agree that the most significant drawback of a block schedule is the teacher's unwillingness to diversify teaching tactics and activities. Many of them remarks that instructional time is missed due to this carelessness or anxiety in block scheduling. Multiple researchers (Skrobarcek *et al.*, 1997; Queen, 2000) and students from throughout the nation have seen an over-reliance on lectures and teacher-centered instruction. It was opposed by Bethal High School, Virginia and Morris RC (2022), with longer class periods, teachers have more time to explore a topic in-depth, engage students in hands-on activities and group discussions, and provide opportunities for reflection and synthesis of old and new knowledge. This can help students to see connections between different topics, understand how new information builds on what they have previously learned, and deepen their understanding of the subject matter. Moreover, it is an effective way to promote deeper learning and integration of old and new knowledge.

On average, the *Level of Perceived Effectiveness of Block Scheduling* in terms of *Assessment Learning* got the mean of $M=3.20$, $SD=0.69$ with a qualitative description of *Moderately Effective*. This means that students' perception of the effectiveness of block scheduling for assessment learning falls within the moderately effective range. With longer class periods per session, it enables students to grasp the material more thoroughly, apply critical thinking skills, and engage in meaningful discussions and activities that promote deeper understanding. As a result, students may be better prepared for assessments, including tests, projects, and presentations. The extended class time also allows for more opportunities for feedback, clarification, and individualized attention, which can contribute to improved academics. Moreover, with longer periods, teachers can delve into complex topics, facilitate hands-on activities, encourage collaborative projects, and provide more individualized instruction. This can lead to improved understanding and retention of subject matter, as well as the development of critical thinking and problem-solving skills.

TABLE 5
LEVEL OF PERCEIVED EFFECTIVENESS OF BLOCK SCHEDULING IN TERMS OF ASSESSMENT OF LEARNING

Assessment of Learning		M	SD	VI	QD
The block scheduling scheme ...					
1	allows learners to have enough time when the instructors implement assessments, collecting evidence of student learning, such as receiving papers or administering tests.	3.25	0.67	SA	HE
2	allows learners to have more time in analyzing and synthesizing information to make argument for example, narrative or persuasive essays or more creative projects.	3.29	0.71	SA	HE
3	allows for more chance of assessing/measuring the learners' understanding at the end of the discussion by written or oral reflection.	3.23	0.70	A	ME
4	allows teachers more time to obtain an accurate picture of the students' current understanding through whole-class questioning or by examining exercise books.	3.24	0.66	A	ME
5	enables more opportunity to engage in problem-solving scenario and developing plans activities due to the longer hour.	3.24	0.69	A	ME
Average		3.25	0.69	SA	HE

Legend:

Parameter	Verbal Interpretation	Qualitative Description
3.25 - 4.00	Strongly Agree (SA)	Highly Effective (HE)
2.50 - 3.24	Agree (A)	Moderately Effective (ME)
1.75 - 2.49	Slightly Agree (SIA)	Slightly Effective (SE)
1.00 - 1.74	Disagree (D)	Not Effective (NE)

As shown in Table 5, the indicator “The block scheduling allows learners to have more time in analyzing and synthesizing information to make an argument for example, narrative or persuasive essays or

more creative projects”, got the highest mean ($M= 3.29$, $SD= 0.71$), and was interpreted as *Strongly Agree* with a qualitative description of *Highly Effective*. This means that the longer contact hour of block scheduling provides students more opportunity to assess and integrate information for narrative, argumentative, or any essays. According to the study of Williams (2011), block scheduling can provide students with more time to analyze and synthesize information, as well as work on longer-term assignments such as essays and creative projects. By devoting extended periods of time to a subject or assignment, students can delve deeper into the material, pose questions, and engage in critical thinking and problem-solving. It also helps students develop time-management and organizational skills, as they must learn to prioritize responsibilities and effectively manage their time over an extended period. Thus, can be a valuable tool for promoting deeper learning, critical thinking, and student engagement.

Meanwhile, the indicator, “*The block scheduling scheme allows for more chance of assessing/measuring the learners’ understanding at the end of the discussion by written or oral reflection,*” got the lowest mean ($M = 3.23$, $SD= 0.70$), and interpreted as *Agree* with a qualitative description of *Moderately Effective*. Despite being the lowest indicator, it still yielded a moderately valued description, which means that the block scheduling scheme makes it easier to assess students' understanding after the discussion through written or oral reflection. According to Landry (2016) study, with longer periods of time dedicated to a particular subject or topic, in a more comprehensive discussion, students can dig deeper into the material provided by their teachers and allowing more opportunities to reflect on their learning. Moreover, students may assess their comprehension through a variety of methods, such as written or oral reflections, quizzes, tests, and group projects.

On average, the *Level of Perceived Effectiveness of Block Scheduling* in terms of *Assessment of Learning* got the mean of $M=3.25$, $SD=0.69$ with a qualitative description of *Highly Effective*. This means students perceive block scheduling to be highly effective for assessing learning. Block scheduling allows students to manage their time more effectively. It enhances concentration and the ability to dive deeper into the material, ultimately leading to better assessment performance.

TABLE 6
SIGNIFICANT DIFFERENCE IN THE COLLEGE STUDENTS’ PERCEPTIONS OF THE EFFECTIVENESS OF THE BLOCK SCHEDULING SCHEME IN TERMS OF INDEPENDENT LEARNING

Profile Variables	Z-statistic	Chi-square	p-value	Decision	Interpretation
Sex	-1.403		0.161	Do not Reject H_0	Not Significant
Age		1.294	0.524	Do not Reject H_0	Not Significant
Department		10.398	0.034	Reject H_0	Significant
Year Level		3.297	0.348	Do not Reject H_0	Not Significant

As shown in Table 6, the *p-value* under the *department* category is less than 0.05 significance level. Thus, the null hypothesis H_0 was rejected. This implies that there is a significant difference in the college student’s perception of the effectiveness of the block scheduling scheme with respect to *independent learning* station when students are grouped according to their college departments. The different departments may have distinct educational approaches, teaching methods, and curriculum structures. Each department's unique characteristics and requirements can influence how students perceive the effectiveness of block scheduling during independent learning. Additionally, students' prior experiences and personal preferences can shape their perception of block scheduling in terms of the department during independent learning station. Some students may thrive in the focused, immersive environment provided by block scheduling, while others may struggle with managing their time effectively or adapting to longer class sessions.

As to the rest of the independent profile variables, the *p-values* are greater than 0.05 significance level. Thus, the null hypothesis was not rejected. In other words, regardless of the students’ sex, age, and year level, their views on the effectiveness of block scheduling vis-à-vis *independent learning* station are similar and do not show any significant variations.

TABLE 7
SIGNIFICANT DIFFERENCE IN THE COLLEGE STUDENTS' PERCEPTIONS OF THE EFFECTIVENESS OF THE BLOCK SCHEDULING SCHEME IN TERMS OF COLLABORATIVE LEARNING

Profile Variables	Z-statistic	Chi-square	p-value	Decision	Interpretation
Sex	-1.698		0.090	Do not Reject H_0	Not Significant
Age		0.853	0.653	Do not Reject H_0	Not Significant
Department		10.566	0.032	Reject H_0	Significant
Year Level		0.995	0.803	Do not Reject H_0	Not Significant

As shown in Table 7, the *p-value* under the *department* category is less than 0.05 significance level. Thus, the null hypothesis was rejected. This implies that there is a significant difference in the college students' perception of the effectiveness of the block scheduling scheme with respect to *collaborative learning* station under the ReFLEx modality when grouped according to the students' college departments. Certain disciplines may require more intensive collaborative efforts due to the nature of the subject, while others may rely more on individual study. These varying demands can affect how students perceive the effectiveness of block scheduling in supporting their collaborative learning needs within their respective departments.

As to the rest of the independent profile variables, the *p-values* are greater than 0.05 significance level. Thus, the null hypothesis was not rejected. In other words, regardless of the students' sex, age, and year level, their views on the effectiveness of block scheduling vis-à-vis *collaborative learning* station are similar and do not show any significant variations.

TABLE 8
SIGNIFICANT DIFFERENCE IN THE COLLEGE STUDENTS' PERCEPTIONS OF THE EFFECTIVENESS OF THE BLOCK SCHEDULING SCHEME IN TERMS OF INTERACTIVE TEACHER-DIRECTED LEARNING

Profile Variables	Z-statistic	Chi-square	p-value	Decision	Interpretation
Sex	-1.365		0.172	Do not Reject H_0	Not Significant
Age		3.517	0.172	Do not Reject H_0	Not Significant
Department		10.464	0.033	Reject H_0	Significant
Year Level		4.592	0.204	Do not Reject H_0	Not Significant

As shown in Table 8, the *p-value* under the *department* category is less than 0.05 significance level. Thus, the null hypothesis was rejected. This implies that there is a significant difference in the college students' perception of the effectiveness of the block scheduling scheme with respect to *interactive teacher-directed learning* station under the ReFLEx modality when grouped according to the students' college departments. On the other hand, the *p-values* rest of the independent profile variables are greater than 0.05 significance level. Thus, the null hypothesis was not rejected. In other words, regardless of the students' sex, age, and year level, their views on the effectiveness of block scheduling vis-à-vis *interactive teacher-directed learning* station are similar and do not show any significant variations.

Each college department has its own distinct academic culture, pedagogical approaches, and disciplinary focus. These factors influence the way students perceived the effectiveness measure being ascertained. The nature of the coursework and teaching methodologies employed by instructors in different departments can contribute to varying perceptions.

Meanwhile, block scheduling, regardless of sex, gender, or year level, provides students with a similar structured learning environment, where classes are condensed into longer periods, allowing for more in-depth engagement with the subject matter. This uniformity in the scheduling format may contribute to a consistent perception of effectiveness across different demographic groups. Additionally, the interactive teacher-directed

learning approach ensures that all students, regardless of their sex or gender, are actively involved in the learning process, promoting a sense of equality in the classroom (Canady & Rettig, 1995; Lindsay, 2000).

TABLE 9
SIGNIFICANT DIFFERENCE IN THE COLLEGE STUDENTS' PERCEPTIONS OF THE EFFECTIVENESS OF THE BLOCK SCHEDULING SCHEME IN TERMS OF ASSESSMENT OF LEARNING

Profile Variables	Z-statistic	Chi-square	p-value	Decision	Interpretation
Sex	-2.298		0.022	Reject H₀	Significant
Age		1.846	0.397	Do not Reject H ₀	Not Significant
Department		6.792	0.147	Do not Reject H ₀	Not Significant
Year Level		4.745	0.191	Do not Reject H ₀	Not Significant

As shown in Table 9, the *p-value* under the *sex* category is less than 0.05 significance level. Thus, the null hypothesis was rejected. This implies that there is a significant difference in the college students' perception of the effectiveness of the block scheduling scheme with respect to *assessment learning* station under the ReFLEx modality when grouped according to the students' sex. Girls are more hard-working and eager to learn compared to boys, which is why, in terms of assessment, girls are more likely to pass it. And as cited in the study by Payn (2020), girls are more engaged than boys. Part of the explanation is that gender gaps on achievement tests have a lot to do with engagement and motivation to take the test itself. However, it is crucial to emphasize that academic success is not solely determined by gender. Many other factors, such as individual motivation, support systems, learning styles, socioeconomic background, and access to resources, play significant roles in educational achievement. It is important to recognize and support the unique strengths and challenges that each individual brings, regardless of their gender.

As to the rest of the independent profile variables, the *p-values* are greater than 0.05 significance level. Thus, the null hypothesis was not rejected. In other words, regardless of the students' sex, age, and year level, their views on the effectiveness of block scheduling vis-à-vis *assessment learning* station are similar and do not show any significant variations.

IV. CONCLUSIONS

This study determined the effectiveness of the block scheduling scheme vis-à-vis the Paulinian ReFLEx at St. Paul University Surigao, as perceived by college students. The study aimed to address the following specific questions: (1) What are the demographic characteristics of the respondents in terms of age, sex, year level, and department? (2) What is the level of the college student's perception of the effectiveness of the block scheduling with respect to the four stations of the Paulinian remote flexible learning experiences namely: independent learning station, collaborative learning station, interactive teacher-directed learning station, and assessment station? (3) Is there a significant difference in students' perceptions of the effectiveness of block scheduling when grouped according to their profiles? (4) Based on the findings, what recommendations can be proposed?

It was noticed in this study that the most valuable contributors to this study were mostly 20–21 years old, with a slightly higher percentage of females compared to males. In terms of year levels, third-year college students dominated the sample pool.

It was perceived by the college students that the BSS vis-à-vis *assessment learning station* is *highly effective* because the block scheduling scheme enhances the students' ability to integrate information and construct well-developed arguments or creative projects. Its positive impact on students' time management and organizational skills further contributes to their overall academic success and preparedness for future endeavors. Meanwhile, BSS is *moderately effective* vis-à-vis *interactive teacher-directed learning station*, *collaborative learning station*, and *independent learning station*. This can be related to the ability of the teacher to facilitate learning such as the application of teaching strategies and pedagogical skills that can elicit students' engagement during the discussion.

Among the 4 learning stations, BSS vis-à-vis *collaborative learning* station got the lowest rating from the respondents. However, despite this result, it is the overall perception of college students that the BSS is moderately or even highly effective vis-à-vis the Paulinian Remote Flexible Learning Experience at St. Paul University Surigao. Lastly, Block scheduling has been proven as positively effective in enhancing student engagement, fostering in-depth learning, and facilitating greater independent learning, interactive teacher-directed learning, and collaboration among students. Hence, with a longer contact hour per session, it enables comprehensive exploration of topics, meaningful discussions, and activities.

However, considering the results, it is being recommended by the researchers that the division or distribution of hours and number of blocks in the current BSS implementation of SPU Surigao be revisited, reviewed, and update if necessary, in order to make the BSS most effective or highly effective vis-à-vis the *collaborative learning* station, *interactive teacher-directed learning* station, and *assessment learning* station. Lastly, the institution should continue regularly evaluating the effectiveness of BSS vis-à-vis the Paulinian ReFLEx to consistently determine the achievement of learning outcomes through the implementation of BSS with ReFLEx.

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