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Prof. Dr. Mahmut DEMİR
Isparta University of Applied Sciences, Isparta, Türkiye

Contact / İletişim

Address/Adres: Isparta Uygulamalı Bilimler Üniversitesi, Turizm Fakültesi, Eğirdir, Isparta - Türkiye

Tel: +90 (246) 2147100
E-mail: ijsser.contact@gmail.com
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A new way of social interaction for educational purposes in architecture design studios during the pandemic

Rahman Tafahomi

A new way of social interaction for educational purposes in architecture design studios during the pandemic

Rahman Tafahomi[1]

[1]Corresponding Author, Department of Architecture and Design, School of Architecture and Built Environment, College of Science and Technology, the University of Rwanda, Kigali, Rwanda, Email: tafahomi@gmail.com, ORCID: https://orcid.org/0000-0002-7172-1302

Article Info	Abstract
	COVID-19 has challenged educational systems in whole parts of the world, including convenient courses and programs such as architecture. The architecture program is designed based on the design studios that deliver major parts of the activities in the program, such as design productions, project presentations, and receiving comments on the design activities from both instructors and juries. To test the students' satisfaction level with social interactions in design studio activities, a five-scale questionnaire was designed, and through Google Forms, the results were analyzed in SPSS. The findings reveal that communication, social interaction, and design activities are significant for the students. The students demonstrate overall satisfaction with the quality of the course delivery. However, the detailed design illustrates that students and instructors adopted an adapted way to the condition to reduce the risk by minimizing the group work and increasing the individual desk crits. This result shows that teamwork and peer learning were reduced during the pandemic.

1. Introduction

An architecture design studio is a basic course that trains students. This course repeats each year and semester in the architecture programs in both bachelor's and master's programs due to the structure of the architecture curriculum (Schon, 1984; 1987). The design studios are the core space for teaching, learning, and training different subjects by instructors and students to draw architectural projects, present design ideas, and receive comments and critiques from the studio coordinator or invited juries. This process of working with the students in design studios includes a strong background in training art and architecture students in Europe, particularly documented in France with Beaux Art and Ecole Polytechnique (Draper, 1977; Drexler, 1975; Garric, 2017; Griffin, 2022; Tafahomi, 2021a), Bauhaus, and "Vkhutemas (Higher Artistic and Technical Workshops in the Soviet Union)" (Dizdar, 2015; Tafahomi, 2021a; Tafahomi, 2023).

The design studio in both art and architecture includes a big room with some drawing tables and chairs for the students to do practical drawings of the different parts of the building, from the abstract concepts to the detailed aspects of the design and construction (Garric, 2017; Griffin, 2022; Tafahomi & Chance, 2023). All activities of the students take place in the design studio, such as studies, drawing, physical model making, and presentations for the example (Tafahomi, 2021b). Although there are some workshops for carpentry, ceramic, metal, and concrete in some universities, many universities still do all the required activities in the design studios, such as the University of Rwanda (DoA, 2012). The students work for three to five years, dependent on the structure of the education in the design studios to develop their knowledge, skills, and ability in drawing, design, and imagination under the supervision of the master of the design studio (Tafahomi, 2023). The studio activities include a set of teamwork and task arrangements between the students and instructors to work on the specific architectural projects (Franz, 1994; Frayling, 1993) that create sets of discussions, dialogues, and social interaction around one table at an intimate distance (FAED, 2009).

The COVID-19 condition resulted in social distancing and wearing face masks for all university students, online activities, and blended classes for theoretical courses. However, the design studios remained on campus as face-to-face activities similar to the other practical courses in the universities (Ando, 2021; Tafahomi, 2022a). Importantly, stick reduction protocols and measures were required to control the pandemic for the physical classes through face masks wearing, social distance, and washing hands or sanitization (Filiz & Konukman, 2020). Particularly, the physical classes were recommended to use alternative scenarios such as local parks, open spaces, tennis courts, or football pitches. However, the activities in the design studios included a long list of activities that students normally preferred to stay in the design due to practical activities (Tafahomi, 2021a) and even theoretical courses (Tafahomi, 2022b). However, the study exposed positive effects of the COVID-19 on the education of architecture program even in the first year (Abu Alatta et al., 2023; Tafahomi, 2021c).

The activities in the design studio face difficulties in delivering educational materials based on a continuous process of dialogue, discussion and communication about the design projects between students and instructors (Schon, 1984; 1987) making it different from other programs in the pandemic time. In other words, wearing face masks and social distance contradicted the character of the design studio due to the activities in the design studios such as group work, desk-crits (desk critiques), and physical model making that all of them run based on the close social distance collaboration and teamwork activities. Therefore, it is supposed that the students have experienced the quality of the design studios during the COVID-19 times based on compulsory measures. To discover the quality of the delivery of the courses during the pandemic time, an online questionnaire was designed to search for the opinions of the students about the quality of the design studio to evaluate the level of satisfaction of the students with the activities in design studios based on the below hypothesis:

H0: there is no association between wearing face masks and social distance measures and the students' satisfaction with the quality of social interaction in design studios during the pandemic.

H1: there is an association between wearing face masks and social distance measures and the students' satisfaction with the quality of social interaction design studios during the pandemic.

The main objective of this research is to determine the quality of the design studios during the pandemic time based on the importance of the quality of the design studio in the whole architecture program. In other words, design studios are significant criteria and indicators for evaluating the quality of the architecture program. So, if the quality of the design studios cannot meet the needs of the students in the training process, the activities in the program will not be successful. However, if the quality of the design studios is acceptable to the users' opinions, the design studios achieve the expected learning outcomes of the program and curriculum.

2. Studies on wearing face masks and social distance in design studios

COVID-19 has resulted in facing the world with an unexpected situation in which the public and private sectors are discovering solutions to the problems (Demir et al., 2021; 2023). Particularly, education activities have experienced a new form of teaching and learning based on blended, online, wearing face masks, and social distance (Buldan, 2021; Ersin et al., 2020). The scale of the effects was global, and the study highlighted that the pandemic affected education activities in more than 185 countries including 1.5 billion people (Marinoni et al., 2020). Wearing face masks and social distancing were key measures to control and protect the students in on-campus study. For this reason, some recommendations were raised to control health conditions, such as healthy classrooms, sustainable architecture design, and medical point of view (Doha et al., 2022). However, the results of the research on the pandemic reported different results including both positive and negative effects on the teaching and learning process in higher education, particularly due to the design studio context (Buldan, 2021; Dizdar, 2015).

The first cluster of studies emphasized the positive aspects of the pandemic to accelerate the speed of blended and online learning in higher education. This group of the study listed some of the key aspects, such as the facilitation of distance learning (Buldan, 2021), a good sense of online teaching and learning (Ersin et al., 2020; Abu Alatta et al., 2023), and a combination of the experimental activities with blended learning (Delialioglu & Yildirim, 2007; Gulbahar & Madran, 2009; Tafahomi, 2021c). The second cluster of studies criticized the achievement of education during the pandemic. For example, the study revealed a high level of anxiety and stress among the users in the online learning activities (Naylor & Nyanjom, 2020), deficiencies in educational materials (Apriyanti, 2020), unpredictability in the educational models (Avcı & Oruc, 2020), less accessibility to site for the analysis (Tafahomi, 2021c), problems for the eyes contact (Simmons et al., 2015), and physical activities (Charlotte et al., 2023) and contact in classes (Ando, 2021; Bonnes & Bonaiuto, 2002; Seifert & Sutton, 2009; Woolfolk, 2016).

Importantly, wearing face masks and being in a position of social distance in the classroom has not been normal teaching conditions for lecturers and students. The study by Will (Will, 2020) highlighted two important aspects of wearing face masks in communication in the classroom, including low-quality pronunciation and unclear lips to predict the exact words through observation, which reduced the possibility getting stress, attributes, and emotions of the presentations in the design studios. Covering the face under masks decreased expression through facial communication (O'Hagan et al., 2022) and eye contact with the users (Simmons et al., 2015). In addition, the study by McKeever (Mckeever, 2022) discovered that wearing face masks changes the level of oxygen in the blood and automatically influences the rhythms of breathing among classroom participants.

However, a design studio encompasses many activities more than a normal classroom does due to various tasks and practical exercises (Frayling, 1993; Garric, 2017). Architectural design studios were defined as the core modules (Borden & Ray, 2006) based on the practical activities of the students in a project-oriented approach under the supervision of the instructors in the whole architecture program (Tafahomi, 2022c). The activities in design studios are constructed on continuous dialogue and interaction between the students and the instructor (Schon, 1987). The design studio is where the students spend most of their educational time studying, drawing, presentation, and learning activities (Ching, 2015; Laseau, 2000). Working together in a design studio has created a specific title for studio culture based on the presentation, interaction, and communication as a small society in academia (Schon, 1984). The level of social interaction between the participants in a design studio is so high due to working together (Gillies, 2003) on design projects in the same process such as drawing, discussion, critiques (crits), and physical model making (Garric, 2017; Griffin, 2022).

The study highlighted the students developed their abilities such as interaction, communication (Garrison & Kanuka, 2004), and presentation through peer learning (Lee, 2005; Woolfolk, 2016) and the practices of instructors (Seifert & Sutton, 2009) in design studios. The students observe other behavioral patterns of classmates and lecturers (Tafahomi, 2021d) to learn different skills. The students personalize, specialize, and fit the activities in their style to apply in the learning process (Salkind, 2008; Santrock, 2011). However, wearing face masks and social distancing reduced the opportunities for the students to fulfill the learning process in the normal way in design studios.

In other words, the teacher and students shape the educational atmosphere (Morgan & Shackelford, 2018) in both studio design and classrooms. The design studios are formed based on a continuity discussion, questions and answers, comments, and drawings between the instructors and students (Dizdar, 2015; Drexler, 1975; Filiz & Konukman, 2020; Frayling, 1993; Schon, 1984). This process includes sets of physical activities together (Bold & Hutton, 2007), and individual for the design production and presentation (Borden & Ray, 2006). This interaction between instructors, students, projects, and educational context (Bold & Hutton, 2007; McClean & Hourigan, 2013). Architecture projects are based on processes and procedures that differ from time to time due to the level of interaction between students, instructors, and projects. Therefore, some level of communication, interactions, and interpretations always is needed in design studios (Mugerauer, 1995; Tafahomi & Chance, 2023).

In summary, wearing face masks and social distancing have been measures to control the pandemic in many countries. However, this new situation created obstacles to normal education in many institutes, particularly the architectural design studios. An architectural design studio is arranged based on the social interaction and communication between the participants through presentations, dialogues, and comments that take the form of the desk-crits. Wearing face masks and social distancing have had some side effects on the normal process of all physical and social interactions, especially in design studios. The design studio differentiation's important aspect occurred when sitting and drawing together in the desk crits activity. This specification of working together as a team contradicted the social distance and wearing face masks in daily activities.

3. Method and materials

According to the author's Ethics Committee Approval Certificate dated October 8, 2023, and numbered 20231005 (file number), this article has no ethical issues. All responsibility belongs to the researchers. All parties were involved in the research of their own free will. The methodology part of this research included five sections: methodology, research design, research process, data specifications and sampling, time, and context.

Methodology: studies discussed both qualitative and qualitative methods to evaluate the quality of teaching and learning education, especially in higher education such as (Cohen et al., 2007; Creswell, 2012; Johnson & Christensen, 2014; Tafahomi, 2021b; Creswell & Creswell, 2018). It was common to observe that the studies applied more questionnaires and statistical analysis in the quantitative research to evaluate the opinions of the

students and to find out respondents and correlations between the answers (Peers, 1996; Neuman, 2006; Almquist et al., 2014; Tafahomi, 2021b; Tafahomi, 2021a; Woolfolk, 2016). Despite the variety of questionnaires (Frankfort-Nachmias et al., 2014), the Likert scale questionnaire is one of the applicable styles in research (Xi et al., 2017; Yang et al., 2013; Tafahomi, 2021e). While the study criticized the unclear scales in the Likert questionnaire (Joshi et al., 2015), the Likert scale questionnaires were applied in educational research, importantly concerning the students' cases in the teaching and learning qualities (Li, 2013; Hartley, 2014; Huertas-Delgado et al., 2019; De Campos et al., 2020). Likert scale questionnaires were common due to the cluster of answers, the ability to sort data, and adaptation to statistical analysis (De Campos et al., 2020; Tafahomi, 2022a; Yang et al., 2013).

Research design: this research applied a five-scale Likert questionnaire to ask the students about the quality of the design studio activities (Schon, 1984) due to wearing face masks and social distancing during the pandemic. The questionnaire was designed based on relationships between the activities in the design studios and the level of satisfaction by the students due to course outputs. To achieve essential data, the questionnaire was divided into different questions to discover the fundamental activities in the design studios importantly individual and group desk-crits (Dizdar, 2015; Drexler, 1975; Filiz & Konukman, 2020; Frayling, 1993; Schon, 1984), discussion (Delialioglu & Yildirim, 2007; Filiz & Konukman, 2020; Lee, 2005), questions and answers (O'Hagan et al., 2022; Schon, 1987; Will, 2020), drawing together with the instructor (Buldan, 2021; Dizdar, 2015; Griffin, 2022; Schon, 1984; Seifert & Sutton, 2009), eye content among the participants (Avcı & Oruc, 2020; Simmons et al., 2015), physical activities and gestures (Ando, 2021; Bonnes & Bonaiuto, 2002; Seifert & Sutton, 2009; Woolfolk, 2016). To evaluate the level of satisfaction of the students about the quality of the activities in the design studios due to wearing face masks and social distancing, the quality of the course, the delivery of the lecturer, learning outcomes, and the quality of voice, quality of the interaction, communication was asked to see if there was any association between the activities in the design studios and the level of the satisfactions of the students. The questionnaire was designed based on an online mode for all the students through Google Forms. Despite the differentiations between the topics, themes, and scales of the projects in the different years of the program, the questions attempted to point out the common activities in the design studios in the department.

Research process: the draft of the questionnaire was checked with three students in the final year of study in the department to see if the questions were clear for respondents. After receiving the students' comments, the questionnaire draft was corrected and then shared with two lecturers in the school to see if any other aspects were missed in the design process. The lecturers' comments were constructed based on the integration of similar questions to reduce the length of the questionnaire. The corrected questionnaire was uploaded to Google Forms, and the students' email addresses were collected from the department's administrative office. The link to the questionnaire was shared with the students, and they were asked to answer the questionnaire at a convenient time.

However, after one month, only a few students answered the questionnaire. The researcher sent three reminders in the next two months to ask them to complete the questionnaire. In the last attempt, I asked the representative to call the students to respond to the questionnaire. This process took three months, and after many follow-ups on the requests, 118 students filled out the questionnaire, and other students did not respond to the request. The collected data was downloaded through Google Forms in Excel format, and after correcting, the quantitative data was inserted in SPSS 20 for analysis.

Data specification and sampling method: the data was combined from the 118 architecture department students who answered the questionnaire. The questionnaire was divided into two sections, including questions that referred to the level of satisfaction of the students with the activities in the design studios, and the second part asked about the general judgment of the students about the quality of the delivery of the courses and the learning outcomes. Although the sample group covered all the students in the department, 118 out of 136 students collaborated in the research process. Seemingly, there were some wrong, inactive, or changed emails that the administrative office was unaware of, and some of the students in the village during the pandemic had difficulty accessing the internet, which was difficult for them. For these reasons, the total number of respondents differed from the total sample in the statistical society of the research.

Research time and context: The research took place in the Department of Architecture and Design at the University of Rwanda and included 136 students in five years of study. Due to the country's policy to measure COVID-19, wearing face masks, social distancing, and sanitization of hands were compulsory. Although the classes were online and blended learning mode, the policy was changed to on-campus activities as face-to-face modes for practical courses such as design studio. The instructors of the design studios had the right to decide the number and

percentage of students who should participate in the hands-on activities due to the measure of social distance in each session. Nonetheless, all students and lecturers faced the practical courses at the time.

The design studios took the place on the second floor of the department. All the design studios included an open space with drawing tables, chairs, shelves for achieving physical models, and normal desks. The drawing tables were rearranged with open distances between them due to measures such as social distance in the design activities. Both instructors and the students did the activities with the weaning face masks and social distancing in the design studios. Although the students learned to work closely with instructors and other students on the drawing tables, the new measure changed the design studio's position and atmosphere based on wearing face masks and social distance.

4. Results

The research data were analyzed using SPSS software and included two categories. The first group of the analytical data was combined from the Mean, Median, and Mode of each question concerning both activities in design studios and the level of satisfaction of the students from the courses during the pandemic due to wearing face masks and social distance. This data set demonstrated that the students were more satisfied with the individual activities with the instructor than with common activities in the design studios. The data are presented in Table 1.

The Mean, Median, and Mode of some questions emphasized the individual working of the students with the instructor in design studios through desk crits and drawing, as questions 14, 16, and 18 in Table 1 referred to such criteria. Despite the high level of marking by the students for the studio activities, the level of marking for the satisfaction with the course outputs was lower. Just two questions were close to the three values of Mean that referred to the desk-crits and design outputs' including questions 15 and 19 in Table 1.

Table 1. Descriptive table of the questions

No	Questions	Mean	Median	Mode
Q1	Understanding of comments through the discussion	3.55	4	4
Q2	Understanding of comments through eye contact with instructors	3.66	4	4
Q3	Understanding of critics with the drawing together	3.82	4	4
Q4	Understanding of critics through physical gesture of instructor	3.65	4	4
Q5	Understanding of comments through asking questions	3.78	4	4
Q6	Observing other students' desk-crits	3.03	3	3
Q7	Individual desk-crits	4.02	4	4
Q8	Assume what perhaps the instructor mentions	3.31	3	3
Q9	Group desk-crits	3.40	3	4
Q10	The quality of the voice due to masks and social distance	3.12	3	3
Q11	The lecturers delivered the topics effectively	3.10	3	3
Q12	The quality of the courses was sufficient	2.84	3	3
Q13	The students performed effectively	2.58	3	3
Q14	The quality of the course delivery satisfied me	2.73	3	3
Q15	The outputs of the design studio satisfied me	2.78	3	3
Q16	The quality of social interaction satisfied me	2.40	2	2
Q17	The quality of design presentation satisfied me	2.74	3	3
Q18	The quality of communication in design studio satisfied me	2.67	3	3
Q19	The quality of comments and critics in design studio satisfied me	2.86	3	3
Q20	The physical environment of the design studio (space, distance, and temperature) supported design activities of the students	2.55	3	3
Q21	The facilities in the design studio (internet, power, and light) supported design activities of the students	2.41	3	4
Q22	Equipment in the design studio (chair, tables, boards) supported design activities of the students	2.49	3	4

To evaluate the relationships between the quality of the design studio and the level of satisfaction of the students from the quality of the voice and social distance, the Log of the level of satisfaction of the students and the quality of the design studio due to wearing face masks and social distance evaluate through Chi-square test. The crosstab (X2 N=1544.619, df=1350, P=.000) demonstrated an association between the students' satisfaction and the activities in the design studio (Table 2). To evaluate the influence of wearing face masks and social distance on the clarity of the voice and communication in the design studio, the voice factor and the design studio activities were examined through chi-square analysis. The results demonstrated an association (X2 N=1063.657, df=840, p= .000) between the voice quality and the architectural studios' design activities. This result confirmed an association between the quality of the voice and design activities. The detailed chi-square analysis demonstrated other

aspects of the association between the voice quality in the social distance and design activities in the design studios (Table 3). The chi-square analysis demonstrated that the quality of the voice while wearing face masks and the social distance was associated with all aspects of activities in design studios except three factors, including physical gestures of instructors, group desk crits, and assumptions of the students about topics highlighted with grey color in Table 4.

Table 2. Crosstab of satisfaction and design studio

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1544.619[a]	1350	.000
Likelihood Ratio	481.637	1350	1.000
Linear-by-Linear Association	6.384	1	.012
N of Valid Cases	118		

Table 3. Crosstab between Log voice and social distance and the activities in the design studios

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1063.657[a]	840	.000
Likelihood Ratio	405.624	840	1.000
Linear-by-Linear Association	32.380	1	.000
N of Valid Cases	118		

Table 4. The relation between the quality of the voice in social distance and design studio activities

No	The quality	Aspects in design studios	P value reports
1		Understanding of comments through the discussion	N=37.884, df=16, p=.002
2		Understanding of comments through eye contact	N=37.263, df=16, p=.002
3		Understanding of critics with the drawing together	N=30.890, df=16, p=.014
4	Influence of	Understanding of critics through physical gesture of instructor	N=24.121, df=16, p=.087
5	the quality of	Understanding of comments through asking questions	N=32.051, df=16, p=.010
6	voice in social	Observing other students' desk-crits	N=29.129, df=16, p=.023
7	distance con-	Individual desk-crits	N=52.157, df=16, p=.000
8	dition on the	Group desk-crits	N=14.911, df=16, p=.531
9		Assume what perhaps the instructor mentions	N=16.342, df=16, p=.429

A chi-square analysis of data between factors in design studio activities and students' satisfaction levels presented some statistical associations. In detail, the discussion activity in the design studio was statistically associated with the opinion of the students about the quality of delivery of the courses by lectures (N=40.406, df=12, p=.000), quality of the courses (N=69.080, df=16, p=.000), and quality of social interaction (N=51.586, df=16, p=.000) in the pandemic time. Therefore, according to the chi-square results, there was adequate evidence to demonstrate that the discussion activity in the design studios was statistically associated with the level of satisfaction of the students about the delivery of the courses.

The eye contact activities between the instructors and the students in the design studio were statistically associated with the quality of the delivery of the courses (N=35.799, df=16, p=.003), quality of the communication (N=42.643, df=16, p=.000), quality of the desk critics (N=41.361, df=16, p=.000), and the design presentation (N=33.059, df=16, p=.007). The drawing together in design studios was statistically associated with the question on the lecturers delivered the courses sufficiently (N=22.616, df=16, p=.018), quality of social interaction (N=29.863, df=16, p=.019), quality of communication (N=40.305, df=16, p=.001), quality of desk critics (N=38.014, df=16, p=.002). The gestures of the instructors in design studios were statistically associated with the lecturers delivered the courses sufficiently (N=30.092, df=12, p=.031) and the quality of communication (N=28.708, df=16, p=.026).

The asking questions activities in design studios from the instructors were statistically associated with the satisfaction from the outputs of the design studios (N=75.541, df=16, p=.000) and quality of desk-crits (N=29.121, df=16, p=.023). The observing desk-crits of other students in design studios was statistically associated with the level of satisfaction of the students with the quality of the social interaction (N=43.621, df=16, p=.000), the quality of desk-crits (N=39.879, df=16, p=.001), and quality of the physical environment of the design studio (N=38.822,

df=16, p=.001). The individual desk-crits activity in design studios was statistically associated with the students' satisfaction level with the quality of desk critics (N=39.879, df=16, p=.001). In the opposite activity, the group desk critics' activity in design studios was not statistically associated with the students' satisfaction level.

The assuming the topics and themes of the courses in design studios were statistically associated with the level of satisfaction of the students with the lecturers delivered the courses sufficiently (N=22.250, df=12, p=.035), quality of courses (N=63.872, df=16, p=.000), the quality of desk-crits (N=30.579, df=16, p=.015), quality of the physical environment in the design studio (N=28.439, df=16, p=.028), and quality of the equipment in the design studio (N=31.559, df=16, p=.011). Importantly, the students' satisfaction level with the quality of facilities, the student's performance, and the quality of the courses were not associated with any criteria in the design studios. In addition, the group desk critics' activities in the design studios did not influence any satisfaction criteria through the chi-square analysis.

4.1. Findings

The results of the analysis demonstrate an association between wearing face masks and the level of satisfaction of the students about the delivery of the courses during the pandemic. Despite the quantitative data and analysis, the research findings referred to some important qualitative factors in the analysis outputs, including interactions, communications, and design production factors highlighted in the analysis and data.

The analysis results demonstrate that social interaction in the design studio has been important for the students in evaluating the quality of the courses in terms of wearing face masks and social distance conditions. For this reason, they select the items that directly refer to the personal and individual interactions between the students and the instructors in design studios, such as individual desk crits and discussions on the design process. In addition, a close distance between the students and the instructors to make possible eye contact is important for the students to evaluate the quality of the courses and activities of the lecturers in the design studios. The answers to the questions highlight that the students are satisfied with the quality of their talking voice when the participants use face masks with an obligatory social distance. This interaction between the students and lecturers takes place in the desk-crits' activities based on the design studios' interaction, importantly the items such as drawing together, discussing, and observing other students' desk-crits.

The data analysis through the Chi-square reveals that communication in the design studio is another key factor that refers to the dialogue between the students, instructor, and design project. The students and instructors are in the design studio to develop a design project, and this objective is achieved through active dialogue and communication. In particular, eye contact, drawing together, making gestures to the instructor, and observing other students' desk-crits are important activities in the design studio to form communication between the students and instructors. These factors demonstrate that communication depends not only on the voice and verbal language medium but also on activities such as physical movement and drawing together as a tool for communication.

Design activity is the main purpose of design studios. However, the results did not demonstrate any significant factors that reduced the quality of the courses due to wearing face masks and social distancing. Despite wearing masks and social distancing in design studios, the students and lecturers innovated a style to communicate on the desk crits by drawing together to achieve the expected results for the design studios during the pandemic. As a matter of fact, the students emphasize the individual desk-crits as a more effective way of interaction, communication, and learning outcomes. In addition, eye contact, asking questions, and desk-crits are more important factors in the design production process due to the chi-square results. In fact, some items in chi-square analysis refer to such results as discussion, eye contact, desk crits, gestures of the instructors, and asking questions. Wearing face masks and social distancing could not create a significant problem for the design studio where everyone works to develop a design project through individual desk crits, physical activities, and asking questions.

The results illustrate that most of the activities in the design studios take place in individual activities rather than group work, such as desk crits, asking questions, and discussion. It means that the students in the design studios preferred to work individually rather than as a team due to the wearing of face masks and social distance measures. On the other extreme, although the analysis results reveal that the students in the grouping from the desk crits can achieve the design development through interactions in the design studio, the students emphasize and prefer the individual crits due to wearing face masks and social distance. This result can reveal that the students attempt to reduce the risk of group activities through individual activities with instructors to personalize and specialize the learning process for themselves.

5. Discussion

Despite both negative and positive literature on the influences of COVID-19 on education, the results of the research demonstrated that the students preferred to follow their style of activities in the design studio (Tafahomi, 2022a; Tafahomi, 2022b) as mentioned in terms of interaction through desk-crits by Schon (Schon, 1987). The studies mentioned the positive effects of the pandemic time on blended learning (Delialioglu & Yildirim, 2007; Gulbahar & Madran, 2009), however, the students' answers demonstrated that they preferred a physical class for social interaction. This result highlighted that the essence and character of the design studio differed from the normal classrooms in presenting the courses in blended and online models of education (Schon, 1984; Tafahomi, 2021c).

The results revealed that the students and instructors successfully interacted in the design studios due to the wearing of face masks and social distancing. The studies mentioned the difficulty of voice and facial interaction with wearing face masks and social distance (Will, 2020; O'Hagan et al., 2022; Mckeever, 2022). However, the findings of this research argued the results. They revealed that both students and instructors adopted a flexible way for design activities in the design studios, and this was important through desk crits, individual comments, and group discussions with some personalized measurements to fit the measures with the studio conditions. This result illustrated that communication, interaction, and presentation were the key aspects of design studios even during the pandemic time (Tafahomi, 2021e; 2021d).

The results showed that students and instructors supported a physical and face-to-face working model in the design studio. While respect for the measures was not part of the research, participants in the design studio followed their styles during the pandemic. It meant the atmosphere of design studios created freedom for the participants to draw their level of social distance and discussion with the face masks. This level of freedom and personalization of the design studios' activities referred to the design studios' differentiation from regular classrooms. Two factors were important in this personalization process, first the design objects such as maps, physical models, and drawing boards (Schon, 1987; Tafahomi, 2022c), and second, the desk crits activities that made the participants so close to the requested social distance (Delialioglu & Yildirim, 2007; Tafahomi, 2021a).

The findings of this research also identified that the students took distance from the usual activities in a design studio as group desk-crits (Schon, 1987; Tafahomi, 2022c) and peer learning (Lee, 2005; Woolfolk, 2016; Tafahomi, 2021d) toward an individual style of working that it contradicted the results for the social interaction (Tafahomi, 2021e). It revealed that the students fit into the COVID-19 condition to find a way for safe social interaction in the design studio, even if it is not a usual activity. For this reason, the individual desk-crits were an essential factor for the students to evaluate the quality of the course during the pandemic time. It approved the theory of Schon (Schon, 1984; Schon, 1987) in the studies on the character of architecture education through dialogue and interaction between the students and the instructors. The students preferred the individual desk-crits as a more compelling factor to evaluate the quality of the learning outcomes.

6. Conclusion

The pandemic challenged all educational processes and procedures, particularly in higher education and architecture design studios, to adapt learning activities to the conditions. Through an online five-scale Likert questionnaire, the students' satisfaction level with the quality of the delivery of the courses was evaluated, and the results reveal that the students were satisfied with the courses in the architecture design studios due to wearing face masks and social distancing. Notably, the students referred to the courses' social interaction, communication, and learning outcomes.

However, social interaction and communication were limited to individual activities between instructors and students, such as drawing together in terms of individual desk-crits in the design studios. The results of the analysis demonstrate the students significantly believe in achieving successful course delivery through individual desk-crits in terms of social interaction in design studios. This means that the students were unsatisfied with the group desk-crits, which contradicted the social interactions in the design studios. The students changed the form of participation for the social interactions in the design studios to reduce the risks of the pandemic through individual activity and making small groups of participants in each desk-crit, discussion, and drawing. The meaning of social interaction changed to a small scale based on the measures of COVID-19 for better safety conditions.

Despite wearing face masks and social distancing as difficulties for education during the pandemic, other factors such as eye contact, gestures, and graphical presentations could facilitate social interaction and communication

in design studios. Notably, the gestures of the lecturers in the design studios covered the problem of voice quality in the communication process. The students find those factors important in the level of stratification with course outputs based on the achievements in drawing together, doing desk crits, and designing presentations.

Although the data and results did not demonstrate any significant factor for reducing the quality of delivery of the courses, seemingly, the students attempted to present their respectfulness to the activities of the lecturers and instructors in the design studios during the pandemic time based on a reciprocal understanding. The contradiction between some items, on the one hand, social interaction and communication, and on the other hand, individual desk crits and drawing together present that the general ideas of the students are different from the detailed ones. In fact, despite the satisfaction with the delivery of the courses, the detailed items demonstrate significant divination from the teamwork and peer learning activities to the individual learning in the design studios. The pandemic changed the quality of activities and also changed the assumptions and expectations of the students simultaneously in design studios.

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Author contribution statements

The author self-contributed the research design and implementation, analysis, and the manuscript's writing.

Disclosure statement

The author reported no potential competing interest.

Ethics committee approval

According to the author's Ethics Committee Approval Certificate dated October 8, 2023, and numbered 20231005 (file number), this article has no ethical issues. All responsibility belongs to the researchers. All parties were involved in the research of their own free will.

Challenges in protecting Rohingya refugees: Pathways for international intervention

Md Syful Islam, Md Muhibbullah, Zobayer Ahmed

Challenges in protecting Rohingya refugees: Pathways for international intervention

Md Syful Islam[1], Md Muhibbullah[2] and Zobayer Ahmed[3]

[1]*Corresponding Author, Ankara University, Ankara, Türkiye, Email: syful.au.bd@gmail.com, ORCID:https://orcid.org/0000-0002-3092-0858*
[2] *Nevşehir HBV University, Nevşehir, Türkiye, ORCID: https://orcid.org/0009-0005-2090-7245*
[3]*Economics & Banking, International Islamic University Chittagong, Bangladesh and Selçuk University, Konya, Türkiye, ORCID: https://orcid.org/ 0000-0002-3168-6055*

Article Info	Abstract
Research Article *Received: 19 February 2024* *Revised: 17 March 2024* *Accepted: 19 March 2024* **Keywords:** *Human rights violations,* *Ineffective mechanisms,* *International law,* *Rohingya refugee*	*This study examines the efficacy of international legal frameworks in preventing human rights abuses against the Rohingya in Myanmar. Despite global human rights conventions, the ongoing crisis highlights a stark disconnect between international norms and their enforcement. The study scrutinizes the limitations of key international bodies, particularly the United Nations Security Council (UNSC), and the challenges posed by national sovereignty and geopolitical dynamics that hinder effective human rights protection. Utilizing qualitative analysis of existing literature, this research identifies the systemic shortcomings within international mechanisms and the inadequate application of the Responsibility to Protect (R2P) principle in Myanmar's context. The findings suggest an urgent need for reform within international legal frameworks and the implementation of more effective measures to uphold human rights universally and ensure the safeguarding of vulnerable groups like the Rohingya. The paper concludes with recommendations to strengthen international legal measures, increased accountability for human rights violators, and a more assertive global stance against violations, aiming to bridge the gap between international legal commitments and real-world implementation.*

1. Introduction

The ongoing plight of the Rohingya, a Muslim minority group in Myanmar's northwestern Rakhine State, epitomizes one of the most dire human rights crises of the modern era (Fuad & Dadan, 2022). The systematic persecution of the Rohingya has called into question the efficacy of the international community's commitment to human rights protection (Ahmed & Emtiaz, 2020; Faisal, 2020). Historically marginalized and stateless, the Rohingya's struggle has intensified amid Myanmar's political transition, exposing critical shortcomings in global human rights advocacy and intervention (Masood & Uddin, 2020).

This study scrutinizes the paradox where international legal frameworks, ostensibly designed to prevent human rights abuses, have fallen short in the context of the Rohingya crisis. It interrogates the inertia of global powers and international organizations that, due to competing interests, have contributed to the persistence of the crisis rather than its resolution (Sabbir et al., 2022). The core problem this research addresses is the evident disconnect between the established international norms for human rights protections and their tangible enforcement, particularly within the UN Security Council (UNSC), against a backdrop of complex geopolitical dynamics (Islam, 2024).

The justification for this inquiry lies in the critical need to understand why existing international mechanisms are failing to protect the Rohingya. Despite the high-profile nature of their predicament, marked by severe human rights violations, the international response has been lackluster (Chowdury, 2018; Faisal & Ullah, 2020). With the humanitarian situation deteriorating, there is an urgent need to reassess and reinforce the mechanisms for international intervention (Md Mostafa & Zobayer, 2023; Syed Magfur & Nasruzzaman, 2020). This study seeks to comprehensively analyze the barriers to effective international intervention and generate insights that could inform a more robust and responsive human rights protection regime. Thus, The study aims to contribute to the scholarly

discourse on international human rights law and offer policy-relevant recommendations that address the gap between international commitments and on-the-ground realities.

The article is methodically structured to facilitate a comprehensive understanding of the challenges in protecting the Rohingya and the pathways for international intervention. Following this introduction, the paper proceeds with a detailed Literature Review that canvasses existing academic discourse and identifies gaps in the field. The subsequent Methodology section elucidates the qualitative research approach, underscoring the analytical methods applied to secondary data. We then present an in-depth discussion of the Mechanisms of International Law, dissecting global entities' various tools and methods to confront human rights abuses. The article continues to analyze the Limitations of International Bodies, focusing on the UNSC and its veto power, economic challenges, and the inefficacies of current legal instruments. The article culminates in a Conclusions and Recommendations section, which not only synthesizes the findings but also proposes strategic measures for strengthening international human rights protection and intervention mechanisms. By providing a clear roadmap of the article's progression, we aim to guide the reader through the complex layers of international law, geopolitical considerations, and the humanitarian imperatives that define the quest for justice and security for the Rohingya people.

2. Literature review

An in-depth analysis of academic research in this field demonstrates a comprehensive analysis of the connection between human rights violations and international law. These studies cover various topics, including fundamental human rights principles, complex international humanitarian law, and broader global legal frameworks. Some evaluations have explored the inefficiencies in international legal frameworks that limit the successful prevention of human rights violations. However, a gap is evident in the comprehensive study of these deficiencies on a global scale, pointing towards an area ripe for further research.

One particular research by Chit and Kean (2017) investigates the actions of the Myanmar government and its legislative approach to the Rohingya rights issue. This study points out the predominant role of executive power in perpetrating these violations. From an international viewpoint, several scholars have concentrated on the crucial matter of Rohingya citizenship, a key factor in the ongoing humanitarian crisis. These academics assert that the Rohingya's claim to citizenship is valid and cannot be justifiably denied by Myanmar, based on historical evidence and international law standards (Kipgen, 2014). Furthermore, refusing citizenship is seen as a breach of international civil and political rights despite the precarious nature of these rights (Holliday, 2014).

In summary, this literature review uncovers substantial research addressing the intersection of human rights violations and international law. While studies are exploring the ineffective aspects of international law globally, more research is needed in this area. The work by Chit and Kean (2017) offers insights into Myanmar's legislative response to the Rohingya situation. Other studies have underlined the importance of acknowledging Rohingya citizenship rights and the resultant violation of international civil and political rights due to the denial of these rights (Kipgen, 2014). The Rohingya people are entitled to basic human rights, yet the Myanmar government has consistently refused these rights, invoking the 1982 citizenship law. This denial of rights is not restricted to the Myanmar government but extends to Bangladesh as well (Sohel, 2017). In a broader context, discussions about the R2P and human rights abuses in Myanmar (Trihartono, 2018) reveal that the Myanmar government's actions amount to violations of international law, including genocide, war crimes, and crimes against humanity. The study "The Rohingya in South Asia: People Without a State" (2018) demonstrates that the Myanmar government, military, and Rakhine state residents have perpetrated genocide against Rohingya Muslims as part of a policy to establish a single nation, language, and religion. This genocide has been described as having progressed through several stages, culminating in 1917. To safeguard the Rohingya, international intervention in Myanmar's affairs is necessary, either by regional organizations or individual states.

Non-interference policies can themselves constitute a breach of the UN's Genocide Prevention principle of R2P when dealing with governmental malpractices against citizens (Othman et al., 2015). However, the concept of the duty to safeguard, often perceived as a principle of soft law, lacks enforceable legal authority for nations. In his work, Nishikawa (2020) probes into whether this duty constitutes a legal mandate for the global community, concluding that it holds moral weight but lacks legal compulsion. Ibrahim and Nordin (2015) examine the extreme challenges experienced by the Rohingya, including genocide, ethnic cleansing, and significant human rights abuses., proposing the principle of Responsibility to Protect (R2P) as a viable resolution to this humanitarian crisis. Meanwhile, Szurlej (2016) uncovers the systematic execution of genocidal acts by Myanmar, identifying them as crimes against humanity and war crimes under the Genocide Convention's Article II while highlighting the necessity for safeguarding human rights without specifying the means to achieve it. The implementation of international

legal standards is further hindered by Myanmar's absence from key international agreements like the 1951 Refugee Convention and its 1967 Protocol, as noted by (Rana & Riaz, 2023), thereby complicating the pathway to resolving such crises. Despite International law, neighboring states should protect vulnerable groups like the Rohingya, but often, these refugees are not welcomed by these countries (Khairi et al., 2018). This review highlights that most academic inquiries have concentrated on breaches of international human rights norms, with a subset of studies examining failures to uphold the R2P principle. Yet, there's a discernible void in the literature concerning the inefficacies within the international legal system, marking a crucial avenue for in-depth investigation within this paper.

3. Methodology

This research primarily involves the analysis of secondary source data, focusing on non-behavioral and non-psychological aspects of the Rohingya protection issue. Therefore, Ethics Committee Approval is not required. All responsibility belongs to the researchers.

This study's qualitative research approach was strategically chosen to achieve its goals. This approach is known for its deep and adaptable nature, ideal for the aims of this research. The focus was to explore the shortcomings of international law's mechanisms. The study primarily relied on secondary data, drawing from authentic sources such as scholarly journals, articles, newspapers, periodicals, and reports. A qualitative strategy was employed to analyze the data using descriptive and analytical methods. This approach facilitated an in-depth examination and interpretation of the topic. Importantly, the qualitative basis of this research sets a foundation for further studies in the future (Corominas et al., 2014).

4. Operational definitions

4.1. Human rights

The Universal Declaration of Human Rights (UDHR, 1948) "defines human rights as inherent entitlements belonging to every person irrespective of race, gender, nationality, ethnic origin, language, religion, or any other status. These rights encompass a spectrum of freedoms including, but not limited to, the rights to life, liberty, freedom from slavery and torture, expression, work, and education." These rights are universally applicable and should be experienced by everyone without discrimination.

4.2. Human rights violation

A violation of human rights occurs when there is an infringement or denial of the basic rights that are universally entitled to all individuals, irrespective of any discriminatory factors.

5. Mechanism of international law

Under international law, mechanisms are the varied tools and methods global entities use to prevent human rights abuses. These include a range of diplomatic and non-violent strategies, targeted sanctions like asset freezes and travel restrictions, implementation of arms embargoes, potential military or humanitarian interventions, and the involvement of the International Criminal Court (ICC) and other tribunals through actions by the UNSC for addressing serious human rights violations.

5.1. Mechanism under international arrangements

With its charter-driven mandate, the UN implements various mechanisms to maintain international peace and uphold human rights. The SC, under Chapter V of the UN Charter, plays a pivotal role. It has the authority to address breaches of peace and security as per Article 39. This includes referring cases to the ICC, imposing targeted sanctions, and enforcing arms embargoes on countries threatening peace. In instances where the SC is inactive, alternative mechanisms come into play under the auspices of the General Assembly (GA) or the Human Rights Council (HRC). These entities are responsible for gathering and analyzing evidence of violations of international law, thereby facilitating criminal proceedings in various legal forums.

Peaceful conflict resolution is central to the UN's approach, as outlined in Chapter VI, Articles 33-38 of the Charter. This chapter emphasizes the importance of negotiation, mediation, arbitration, and other non-violent methods in dispute resolution. The SC and the International Court of Justice (ICJ) play significant roles in facilitating these peaceful resolutions. When peaceful measures are insufficient, Chapter VII, Articles 39-51 of the

Charter, allows for the use of force. This includes non-military measures like economic sanctions and communication restrictions, escalating to military interventions coordinated by the SC and the Military Staff Committee, if necessary.

The UN Charter also establishes various bodies focused on human rights issues, such as the HRC and the CSW. These charter-based bodies are instrumental in promoting and protecting human rights. Additionally, the Resolution 1503 mechanism, established by ECOSOC in 1970, enables individuals and NGOs to report systematic human rights violations. These reports are thoroughly examined by the appropriate UN committees, ensuring that grievances are addressed effectively. Through these diverse and comprehensive mechanisms, the UN strives to address global conflicts, protect human rights, and foster international cooperation, thereby significantly preserving worldwide peace and security.

5.2. Mechanism under regional arrangements

Chapter VIII of the UN Charter, particularly Articles 52-54, emphasizes the importance of regional arrangements and agencies in maintaining international peace and security. These regional initiatives are crucial, especially when they align with the UN objectives and principles. The SC is responsible for encouraging the development of peaceful settlement mechanisms within these regional frameworks. Initiatives can be undertaken by the states or through SC referrals.

The SC's ongoing awareness and involvement in activities conducted by these regional entities are critical for ensuring cohesive global efforts in conflict. Article 52 specifically acknowledges various regional organizations, "including the Council of Europe, the Organization of American States (OAS), the African Union, the Organization of Islamic Cooperation (OIC), the Arab League, the Commonwealth of Independent States (CIS), and the Association of Southeast Asian Nations (ASEAN). Significant human rights conventions have been adopted by these regional organizations, such as the European Convention for the Protection of Human Rights and Fundamental Freedoms (1950), the Inter-American Convention on Human Rights (1969), the Arab Charter on Human Rights (1994), the African Charter on Human and Peoples' Rights (1981), and the Charter of the Commonwealth of Independent States (1991)."

The Committee on the Rights of the Child (2012) also recommends that states collaborate with the ASEAN Commission on the Promotion and Protection of the Rights of Women and Children. This collaboration aims to further the implementation of the Convention on the Rights of the Child and other human rights instruments across ASEAN member states. Through the stipulations of Chapter VIII of the UN Charter, the significance of regional entities in contributing to global peace, security, and human rights advancement is established.

5.3. Mechanisms under different treaties and conventions

Various international legal instruments have been established to support and enhance human rights globally. These instruments provide a robust foundation for universal human rights recognition and enforcement:

- *United Nations Charter:* As a member of the UN, Myanmar is obligated to uphold the principles outlined in the UN Charter, which emphasizes the safeguarding and advancement of human rights and basic freedoms for every individual, regardless of their race, gender, language, or religious beliefs. Despite this, there have been occurrences indicating that the government of Myanmar has not consistently met these commitments. Reports have surfaced suggesting involvement in breaches of human rights and an absence of responsibility among government military and security forces.

- *Universal Declaration of Human Rights:* This Declaration, notably in Article 15, affirms the right of every individual to a nationality and guards against arbitrary deprivation of nationality. It also outlines the rights of aliens, including security, privacy, equality before the law, marriage rights, and freedom of thought and expression.

- *1954 UN Convention on the Status of Stateless Persons & 1961 UN Convention on the Reduction of Statelessness:* These conventions align with the UDHR in protecting stateless individuals and ensuring they are not arbitrarily deprived of nationality. They emphasize the rights of aliens, including personal security, privacy, and equality before the courts.

- *International Covenant on Economic, Social and Cultural Rights (1966)*: This Covenant, along with its counterpart on civil and political rights, sets a standard for human rights as a key principle in international relations, promoting a culture of peace.

- *General Assembly resolution 40/144 (1985):* This resolution serves as a directive for countries to establish and enforce legal frameworks to safeguard the human rights of individuals who are not citizens. This resolution emphasizes the importance of ensuring that these protections are free from discrimination related to an individual's race, gender, language, or religious beliefs.

- *Convention on the Rights of the Child (CRC):* Myanmar, as a signatory, is obligated to protect Rohingya children's rights, including non-discriminatory access to birth registration and nationality.

- *Convention on the Elimination of All Forms of Discrimination against Women (CEDAW):* Myanmar is bound to ensure gender equality in nationality rights, as per Article 9 of CEDAW, and protect Rohingya women from discrimination.

- *Convention on the Rights of Persons with Disabilities (CRPD):* Ratified by Myanmar, this Convention in Article 18 recognizes the rights of disabled persons to movement freedom, choice of residence, and nationality.

- *Statute of the International Criminal Court (Rome Statute):* Although Myanmar has not ratified the Rome Statute, its principles regarding crimes against humanity are recognized as a standard within international law, holding universal applicability.

- *Convention on the Prevention and Punishment of the Crime of Genocide:* Genocide, as defined in this Convention, is a crime under customary international law, binding on all states, including Myanmar.

- *Treaty-Based Bodies:* The establishment of six principal committees, each dedicated to particular aspects of human rights, has been a direct outcome of numerous global accords. These committees concentrate on areas including civil and political liberties, economic, social, and cultural entitlements, issues of racial bias, practices of torture, gender-based discrimination, and the rights of children. These international instruments and committees collectively work towards upholding and enforcing human rights standards globally, ensuring protection and justice for all individuals regardless of nationality, gender, or other statuses.

Table 1. Mechanism of international law: At a glance

Mechanism under international arrangements	Mechanism under regional arrangements	Mechanism under different treaties and conventions
UN Charter	Chapter VIII of UN Charter	Universal Declaration of Human Rights
Security Council (SC)	Council of Europe	UN Convention on the Status of Stateless Persons
International Criminal Court (ICC)	Organization of American States (OAS)	UN Convention on the Reduction of Statelessness
General Assembly (GA)	African Union	International Covenant on Economic, Social and Cultural Rights
Human Rights Council (HRC)	Organization of Islamic Cooperation (OIC)	General Assembly resolution 40/144
International Court of Justice (ICJ)	Arab League	Convention on the Rights of the Child (CRC)
Military Staff Committee	Commonwealth of Independent States (CIS)	Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)
Commission on the Status of Women (CSW)	Association of Southeast Asian Nations (ASEAN)	Convention on the Rights of Persons with Disabilities (CRPD)
ECOSOC Resolution 1503		Rome Statute of the International Criminal Court Convention on the Prevention and Punishment of the Crime of Genocide

5.4. Principle of responsibility to protect (R2P) and its application in Myanmar

The principle known as the R2P is called upon during extreme human rights crises, including significant loss of life or acts of ethnic cleansing. The ICISS has elucidated that R2P comes into play when a state fails to safeguard its population or is directly involved in committing such violations. This shifts the paradigm from a state's right to humanitarian intervention to an obligation of response (Haacke, 2009). Under this principle, the state is primarily responsible for safeguarding its citizens. This includes actions taken and not taken by state authorities (Evans, 2004). The concept of state sovereignty, intertwined with human rights norms and the broader discourse on human security, underscores this responsibility.

In his 2009 report, Ban Ki-Moon, the then UN Secretary-General, underscored the commitment made during the General Assembly's World Summit on the R2P, highlighting the obligation of states to shield their citizens

from severe crimes, including genocide, war crimes, ethnic cleansing, and crimes against humanity. The international community is expected to support states in achieving this responsibility. The application of R2P begins with utilizing peaceful strategies, such as diplomatic and humanitarian efforts, under Chapters VI and VIII of the UN Charter, all within the UN's purview. Should these measures prove insufficient, the SC may contemplate more assertive responses, potentially involving military action under Chapter VII, on an individual basis (Gowlland-Debbas, 1994). Nevertheless, the invocation of R2P is subject to ongoing discussions, particularly regarding concerns over the infringement of national sovereignty and the justification of using military force to uphold human rights (Pandiaraj, 2016). General Assembly resolutions, often termed "soft law," are not legally binding, which further complicates the enforcement of R2P (Olivier, 2002).

In practice, R2P was first referenced in Security Council Resolution 1674 (2006), affirming the primary responsibility of conflict parties in protecting civilians. The principle saw notable application in Libya with Resolution 1970, where the SC acknowledged the Libyan authorities' R2P and its population. This led to Resolution 1973, authorizing force for humanitarian protection without the consent of the Libyan government – a historic first (BELLAMY & WILLIAMS, 2011). Contrastingly, the situation in Syria presents a different scenario. Despite attempts to apply R2P, the SC has not reached a consensus, mainly due to opposition from Russia, emphasizing Syria's sovereignty (Negrón-Gonzales & Contarino, 2014). The case of the Rohingya Muslims in Myanmar presents a dire need for rapid R2P intervention, with the UN and international community highlighting potential ethnic cleansing and crimes against humanity. The denial of access to Myanmar hints at the necessity of R2P to alleviate the worsening situation. However, challenges in applying R2P persist, especially considering the veto power in the SC and the contrasting positions of Russia and China, as evidenced in the Syrian crisis.

6. Analyzing the limitations of international bodies in protecting human rights

The ineffectiveness of international mechanisms in protecting fundamental human rights can be attributed to various factors, including the limitations of the UN SC and its veto power.

6.1. Security Council and its veto power

For instance, the SC's inadequate response to the Rohingya crisis in Myanmar highlights these shortcomings. Despite the urgent need for action in the face of ethnic cleansing, which resulted in over half a million refugees within a month, the council failed to implement a comprehensive arms embargo that might have pressured the Myanmar military to halt their actions. The military, led by Senior General Min Aung Hlaing, launched a violent campaign against the Rohingya, characterized by extreme brutality and scale, purportedly as a reaction to attacks on police and army posts by the Arakan Rohingya Salvation Army. This led to a widespread scorched-earth strategy aimed at driving the Rohingya from their homes and country (Callahan, 2018).

Such a systematic attack against civilians is considered a crime against humanity. However, the SC chose inaction over decisive measures. This failure raises serious questions about the council's effectiveness in preventing ethnic cleansing. The absence of a UN-wide embargo places the responsibility on individual nations to exert pressure on Myanmar's military. Countries concerned about the situation in Rakhine State should halt all military assistance, arms transfers, and cooperation with Myanmar. In addition to the arms embargo, the Council should leverage its influence to demand an end to human rights violations and crimes against humanity in Myanmar, ensuring unrestricted access to the region for humanitarian workers, the UN, journalists, and human rights observers. This will prevent the atrocities from being ignored (Zahed, 2021). The international community must send a clear message against the ethnic cleansing campaign in Myanmar. Given the extensive destruction, killings, and displacement of hundreds of thousands, remaining passive is not a viable option.

6.2. Economic challenges

The UN, tasked with addressing global human rights issues, faces significant financial challenges. The organization's peacekeeping budget has escalated, reaching approximately $3.2 billion in October 2010. A significant hurdle is the irregular payment of dues by over half of its member states. Larger, more influential countries often justify their non-payment or delayed contributions to the UN's budget, sometimes disputing the legitimacy of the organization's expenses (Cetindamar, 2007).

6.3. Time-consuming process

Its protracted and complex procedures often hinder the UN's approach to addressing human rights violations. An example is the 1503 procedure involving multiple action stages against states accused of severe human rights

abuses. Initially, a complaint is received at the Geneva office, which is then forwarded to the implicated country, allowing 12 weeks for a response. Following this, the complaint is reviewed by the Working Group on Communications, which convenes annually. If severe human rights issues are indicated, the matter is escalated to the Working Group on Situations, which meets annually. In cases of substantial evidence of violations, the issue is finally brought before the HRC, which examines the situation in a confidential session once a year. This lengthy process and the UN's inability to maintain a readily available peacekeeping force significantly hampers rapid and effective responses in crises (Hampson, 2007).

6.4. Limited binding power of international legal instruments

International resolutions, like those from the SC, are often considered 'soft law' and don't carry mandatory legal obligations for member states. Yet, these non-binding documents can have a significant influence on international law. They may serve as evidence of existing laws or contribute to the formation of *'opinion juris,'* a principle where a state acknowledges certain customs as legal obligations. This can lead to the development of new international customs recognized as law under Article 38 of the Statute of the ICJ. The widespread acceptance of such soft-law instruments can legitimize certain behaviors and make it challenging to justify opposing actions legally (Goldmann, 2012). An example is Resolution 1674 from 2006, where the concept of R2P was first acknowledged by the SC, underlining the primary duty of conflict parties to protect civilians (Hunt, 2019). However, the enforcement of these laws is often perceived as weak due to the lack of robust mechanisms ensuring compliance. International law largely consists of treaties between sovereign states who voluntarily join and adhere to these agreements. States can withdraw, ignore, or find loopholes in these agreements. While enforcement at the sovereign level is generally lacking, some states do rigorously uphold international laws, such as those against piracy, which is enforced by many navies. This shows that while sovereign states can circumvent international law, they can also strongly enforce it within their jurisdiction.

6.5. Ease of withdrawing from international agreements

Withdrawing from international treaties is relatively straightforward, posing challenges in holding countries accountable. In a notable instance, President Vladimir Putin of Russia decided to pull out from the ICC following a judgment related to Russia's activities in Crimea. Although Russia was a signatory, it had not formalized its commitment to the Rome Statute that established the ICC. This decision places Russia among other countries, such as the United States, Sudan, and Israel, which have either chosen to leave or have not completed the ratification process of the statute. Additionally, nations like China and India have decisively opted out of joining the ICC. Countries such as South Africa, Burundi, and The Gambia have moved to exit the ICC amid broader critiques regarding the court's perceived disproportionate attention to African states (Groenleer, 2016).

6.6. Terrorism propaganda

Accusations of terrorism are often employed globally to achieve political objectives, frequently overlooking the basic human rights of those labeled as terrorists. For example, the Myanmar government's labeling of the Rohingya as terrorists following an ARSA attack provided a pretext for military operations against them, which evidence suggests were pre-planned. This approach infringes on fundamental human rights, including the right to life and a fair trial.

6.7. Global politics

Global politics, especially the division between East and West, is crucial in resolving international issues. Often, a consensus on global problems is unachievable due to the differing interests of world powers. Superpowers tend to prioritize their interests, overlooking the actual issues at hand.

6.8. Silence of the east

Rakhine, recognized as one of the most underdeveloped regions in Myanmar, serves as the backdrop for a major economic venture spearheaded by China. This initiative encompasses a deep-sea port in Kyaukpyu valued at $7.3 billion, pipelines linking Rakhine with China's Yunnan province, and an industrial park costing $2.3 billion. While China's engagement in Myanmar's domestic affairs has been evident in areas like the Kachin and Shan states, its focus on Rakhine is largely motivated by economic pursuits. According to Nick Marro of The Economist Intelligence Unit, China's hefty financial commitments in Rakhine, which lies at the epicenter of ongoing conflict, significantly shape their strategic moves in the area. The Kyaukpyu Special Economic Zone, covering over 4,000 acres and is a pivotal element of China's Belt and Road Initiative, emerged in 2013 from a collaborative effort

between the Chinese and Myanmar governments. The persistent unrest in Rakhine poses potential risks to the progression and stability of these Chinese-led infrastructure endeavors (Groenleer, 2016; Tritto & Camba, 2022).

6.9. Silence of the West

A probe by the UN into the military actions in Myanmar, resulting in the exodus of close to 700,000 Rohingya Muslims, has called for legal action against the military chiefs for allegations of genocide, human rights abuses, and war crimes. Ms. Aung San Suu Kyi, who holds a leading position in Myanmar's government, has not publicly addressed these matters, including the hardships faced by the Rohingya community and the targeting of journalists. Brad Adams from Human Rights Watch notes a complete transformation in Suu Kyi's stance compared to her former image as a human rights advocate. This shift has unsettled the Western approach towards Myanmar, which was traditionally based on supporting Suu Kyi as a symbol of resistance against the military. Western countries are now struggling to develop an effective strategy to assist the Rohingya, who number nearly a million refugees in Bangladesh. Despite the Myanmar army's actions, which include murder, rape, arson, and ethnic cleansing, resulting in thousands of missing and presumed dead Rohingya, the response from countries like the USA, Canada, and the EU has been limited to financial sanctions and travel bans on a few generals involved in these operations (Fair, 2018).

7. Conclusions and recommendations

The ineffective mechanisms of international law in preventing human rights violations against the Rohingya in Myanmar are a complex issue, highlighted by various academic works. One significant aspect is the non-interference principle of ASEAN, which limits its effectiveness in addressing the crisis, suggesting that international human rights law could offer an alternative foothold. NGOs play a crucial role in advocating for international human rights standards in Myanmar, as they bridge the gap between legal frameworks and on-the-ground realities. The UN SC's response to the Rohingya crisis has been critically analyzed, revealing shortcomings in aligning with international human rights laws. The complexities of international law principles applied to such crises are further discussed, emphasizing the legal intricacies involved. Additionally, the role of international law in regulating information operations is explored, especially in the context of online aspects of the genocide against the Rohingya. These papers collectively underscore the challenges and potential pathways for more effective legal mechanisms in protecting vulnerable communities like the Rohingya.

The UN, representing the international community, must utilize all available peaceful means, including diplomatic and humanitarian efforts, to support Myanmar in protecting its people from genocide, crimes against humanity, and war crimes, collaborating as per the UN Charter when necessary.

- Updating the veto mechanism within the SC is necessary to enhance its functionality and effectiveness.

- The Sc needs to ensure that those responsible for violations of international law in Myanmar are held accountable, either by referring the situation to the ICC or by establishing a specialized international criminal tribunal.

- The Council should enact specific sanctions targeting individuals implicated in serious breaches of international law, including imposing travel bans and freezing assets.

- Instituting an arms embargo against Myanmar is crucial to prevent the misuse of weapons. Without a resolution from the SC, individual countries should independently cease arms transfers to Myanmar.

- Should the SC fail to act, alternative bodies such as the GA or the HRC should create entities dedicated to collecting and evaluating evidence of violations of humanitarian and human rights laws. This effort would aid in assembling documentation essential for unbiased legal proceedings at various levels of the judiciary.

- A thorough examination of the UN engagement in Myanmar since 2011 is warranted to assess its success in averting or mitigating crises, to derive lessons to enhance future interventions and establish accountability frameworks.

- The repatriation of refugees and the resettlement of displaced persons should be conditional upon assurances of safety, voluntariness, dignity, and robust human rights protections. Given the current circumstances, such returns are not advisable.

- States should halt operational support to Myanmar's security forces until there is evidence of reform, international support for such reform, and cooperation with global mechanisms for accountability.

- The UN should establish a trust fund for victim support, offering psychological, legal, and livelihood assistance designed with victim consultation.

- International mechanisms need to operate independently of global politics.

- In some instances, these mechanisms should have the authority to override national laws and sovereignty to protect human rights.

- The UN should maintain a ready peacekeeping force to intervene in cases of human rights violations when national efforts fail.

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The authors equally contributed to the research design and implementation, analysis, and the manuscript's writing.

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Ethics committee approval

This research primarily involves the analysis of secondary source data, focusing on non-behavioral and non-psychological aspects of the Rohingya protection issue. Therefore, Ethics Committee Approval is not required. All responsibility belongs to the researchers.

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Predictive analysis of motivation and learning strategies on academic achievement of postgraduate students

Stella Eteng-uket, Eteng Effiom

Predictive analysis of motivation and learning strategies on academic achievement of postgraduate students

Stella Eteng-Uket[1] and Eteng Uket Effiom[2]

[1]Corresponding Author, Department of Educational Psychology, Guidance &Counseling, Faculty of Education,, University of Port Harcourt, Nigeria, Email: Stella.eteng-uket@uniport.edu.ng, ORCID:https://orcid.org/0000-0001-7042-4894

[2]Department of Educational Psychology, Guidance &Counseling, Faculty of Education Ignatius, Ajuru University of Education, Port Harcourt, Nigeria, ORCID:https://orcid.org/0009-0000-8219-5224

Article Info	Abstract
	In today's rapidly evolving educational landscape, attaining excellent academic achievement and outcome is often characterized by a multifaceted interaction, such as the intricate prediction and relationship between motivation, learning strategies, and academic outcomes. This thus prompted the study, which sought to carry out a predictive analysis of motivation and learning strategies on the academic achievement of postgraduate students. It adopted the correlational research design; a sample of 333 was drawn using a multi-stage sampling procedure. The Motivated Strategies for Learning Questionnaire was the instrument used. Validity and reliability measures were established. The data were analyzed using simple and multiple regression. The results revealed that motivational and learning strategies significantly predict the academic achievement of postgraduate students, both independently and jointly. Considering the findings, it was suggested, among others, that educators should promote effective cognitive strategies to improve the performance of postgraduate students.

1. Introduction

In today's rapidly evolving educational landscape, pursuing quality education has become a fundamental goal for societies worldwide. The Sustainable Development Goal 4 (SDG 4) emphasizes the importance of ensuring inclusive and equitable quality education for all, aiming to equip individuals with the knowledge, skills, and attitudes needed to thrive in an ever-changing global environment. Subsequently, in this fast-paced, evolving, and competitive educational landscape, pursuing higher education has become an indispensable pathway for individuals seeking to achieve quality education, unlock their full potential, and make meaningful contributions to society. Among these individuals, post-graduate students represent a group of highly motivated scholars who embark on a rigorous and intellectually challenging journey to attain advanced knowledge and expertise in their chosen fields. These post-graduate students' academic outcomes have profound implications for their personal and professional growth and the overall quality advancement of knowledge and innovation.

This is more so because, in today's rapidly evolving knowledge-based society, pursuing advanced education at the postgraduate level is pivotal in shaping the future of individuals and institutions alike. Thus, within this academic landscape, attaining academic excellence as an outcome has become an aspiration that is both sought-after and revered. Consequently, as the educational paradigms continually evolve, the quest to unravel the mechanisms that underlie students' academic success remains a paramount concern. Not surprisingly, within this realm of academia, the assessment and understanding of the educational outcomes and achievement of students have garnered significant attention (El-Adl & Alkharusi, 2020; Hayat et al., 2020; Mega et al., 2014; Pintrich, 2004; Obrent, 2012; Schneider & Preckel 2017; Zimmerman & Schunk, 2011).

This is also so as the pursuit of this excellent academic achievement and outcome is often characterized by multifaceted interactions between various psychological and cognitive factors (El-Adl & Alkharusi, 2020; Duru et al., 2014; Hariri et al., 2021; Hayat et al., 2020; Lisa et al., 2023; Mega et al., 2014; Muwonge et al., 2019; Obrent 2012; Schneider & Preckel 2017; Ulstad et al., 2016; Zimmerman & Schunk, 2011). Among these and other studies, the intricate relationship between motivation, learning strategies, and academic outcomes has garnered significant attention from scholars and educators alike. (Ahmed et al., 2016; Akyol et al., 2010; Crede & Philip 2012; El-Adl, & Alkharusi, 2020; Hayat et al., 2020; Kavyar et al., 2022; Kusurkar et al., 2013; Keklik & Keklik 2013; Lynch 2010; Mega et al., 2014; Mirzaei-Alavijeh et al., 2019; Muwonge et al., 2019; Nabizadeh et al., 2019; Neroni et al., 2019; Pekrun et al., 2002; 2011; Pekrun et al., 2009; Pokay & Blumenfeld, 1990; Obrent, 2012; Schneider & Preckel, 2017; Ulstad et al., 2016; Wild & Neef, 2023; Yusof et al., 2021).

2. Motivation, learning strategy, and academic achievement

Academic achievement culminates a student's efforts and accomplishments in an educational setting. It is the progress made toward acquiring educational skills, materials, and knowledge, usually spanning various disciplines (Bolt 2011). Grades, test scores, knowledge, and skills acquisition often measure it. According to Bolt (2011), the concept is understood as a spectrum along which one can "achieve" specific skills and knowledge, possibly further developing those skills and increasing knowledge's depth, breadth, and specificity. He further posits that it revolves around the central goal of improving the educational understanding of the students. While various factors contribute to academic success, two significant components that play a crucial role are motivation and learning styles.

Motivation, a complex and dynamic psychological construct, is a force that propels one into action. It acts as the driving force behind students' behavior and academic achievement. Motivation, a central driving force behind human behavior, shapes students' engagement, commitment, and academic performance. This study recognizes motivation as a multifaceted construct. Literature has identified constructs like value (intrinsic goal orientation, extrinsic goal orientation, and task value), expectancy component (control beliefs and self-efficacy learning and performance), and affective components (test anxiety) as essential components of motivation (Duncan & McKeachie, 2005; Pintrich et al., 1993). According to them, value components focus on why students engage in an academic task. This value component includes such factors as intrinsic goal orientation (focus on learning and mastery), extrinsic goal orientation (focus on grades and approval from others), and task value beliefs (deals with judgments of how interesting, helpful, and essential the course content is to the student). Expectancy components refer to students' beliefs that they can accomplish a task (Duncan & McKeachie, 2005). This expectancy component includes factors such as self-efficacy and control beliefs for learning. Self-efficacy is a self-appraisal of one's ability to master a task. It is the expectancy for success (specific to task performance), judgments of one's ability to accomplish a task, and confidence in one's skills to perform a task. Self-efficacy includes judgments about one's ability to achieve a task and confidence in one's skills to perform that task (Duncan & McKeachie, 2005; Pintrich et al., 1993). Control beliefs for learning, on the other hand, refer to students' beliefs that outcomes are contingent on one's effort rather than external factors such as luck; it also relates to students' beliefs that their efforts to learn will result in positive outcomes. Studies have shown that the motivational components are related to students' behavior and achievement (Duncan & McKeachie, 2005; Pintrich et al., 1993). The third general motivational construct is affected and operationalized in responses to the test anxiety scale, which taps into students' worry and concern over taking exams. Research has shown that task value relates to academic achievement (Al-Harthy & Aldhafri, 2014; Stegers-Jager et al., 2012), likewise goal orientation (Bulus, 2011; Chyung et al., 2010), self-efficacy (Ahangi & Sharaf, 2013; Klassen et al., 2008) and control of belief for learning (Kavita, 2014).

Concurrent with motivation, students' strategies to navigate the educational landscape are equally crucial. According to Lee (2014), "learning strategies" encompass a broad spectrum of cognitive and behavioral characteristics. Mayer (2007) explained that a learning strategy refers to the mental processes students develop during learning to improve learning quality and help them achieve their goals. Learning strategies are processes to obtain, organize, or transform information (Ahmed, 2016; Alexander et al., 1998). Learning strategies represent diverse cognitive, metacognitive, and behavioral approaches students employ to process, assimilate, and retain information. Cognitive learning strategies refer to the steps or operations used in learning or problem-solving that involve direct analysis, transformation, and synthesis of learning materials.

Researchers, over time, to create some order, have made some classifications of this broad concept, with each classification having the recurring theme of cognitive strategy, metacognitive strategy, resource management strategy, and affective/motivational strategy (Duncan & McKeachie, 2005; Lee, 2014; Pintrich et al., 1991; O'Malley & Chamot, 1990; Shannon, 2008). Pintrich et al. (1991) specifically classified learning strategies into cognitive,

metacognitive, and resource management strategies. Cognitive strategies relate to how learners take in and make sense of information. It includes strategies like rehearsal, elaboration, organizing, and critical thinking strategies. Rehearsal is a cognitive learning strategy adopted to memorize information by recitation and recapitulation (Lewalter, 2003). Organizing refers to that strategy that helps learners select appropriate information and construct connections among the information to be learned (Pintrich et al., 1991). Elaboration refers to a type of cognitive learning strategy that builds connections between new information and existing knowledge or experience; they help the learner integrate and connect new information with prior knowledge, e.g., paraphrasing, summarizing, and creating analogies (Duncan & McKeachie, 2004; Lewalter, 2003; Pintrich et al., 1991). Another cognitive strategy is Critical thinking, which refers to the degree to which students report applying previous knowledge to new situations to solve problems, reach decisions, or make critical evaluations of ideas or concerning standards of excellence (Duncan & McKeachie, 2004; Lewalter, 2003; Pintrich et al., 1991).

The second general classification is metacognitive strategies. Metacognition refers to the awareness, knowledge, and control of cognition. It refers to methods used to oversee, regulate, or self-direct learning. Metacognitive learning strategies relate to learner's awareness of their own learning/thinking processes and their ability to manage the processes involved in learning, such as planning (anticipating the sequence of behaviors necessary to accomplish learning tasks), monitoring (of one's comprehension and tracking of one's attention), and regulating (seeking or arranging conditions that facilitate learning as well as to fine-tuning and continuous adjustment of one's cognitive activities) progress to accomplish a learning task (Duncan & McKeachie, 2004; Lewalter, 2003; Pintrich et al., 1991). This learning strategy essentially deals with the learners' awareness of their learning/thinking processes and their ability to manage the processes of learning

The third classification is the resource management strategy. Resource management deals with learners' strategies to direct their learning using resources. Resource management strategies are learners controlling resources other than their cognition (Duncan & McKeachie, 2004). They further posit that they are techniques for managing and organizing the external resources necessary for learning (Duncan & McKeachie, 2004). It includes strategies such as time and study environment and effort regulation. Time and study environment strategy is scheduling, planning, regulating, and managing one's study time and environment (Duncan & McKeachie, 2004; Pintrich et al., 1991). Effort regulation as a learning strategy involves controlling effort and attention in the face of distractions, uninteresting tasks, and persisting in complex or tedious tasks (Duncan & McKeachie, 2004; Pintrich et al., 1991). According to Pintrich et al. (1991), two other learning strategies are peer learning, which involves using a study group or friends to help learn, and help-seeking, which consists of seeking help from peers or instructors when needed. Some studies have linked these strategies to academic achievement (Akyol et al., 2010; Hayat et al., 2020; Nabizadeh et al., 2019). Effective learning strategies are essential tools that empower postgraduate students to navigate the complexities of their chosen fields, optimize their comprehension, and facilitate knowledge application.

2.1. The present study

While many factors contribute to academic success, understanding the multifaceted interplay between motivation, learning strategies, and academic achievement is crucial in unlocking the true potential of postgraduate students. The context of postgraduate education introduces an additional layer of complexity to this intricate relationship. With rigorously heightened academic demands, intellectual challenges, specialized research pursuits, and expectations, postgraduate students navigate a terrain that necessitates a refined understanding of motivation and learning strategies. The relationship between motivation, learning strategies, and academic outcomes of postgraduate students is intricate and interdependent. A harmonious synergy between motivation and strategic learning behaviors can create a self-reinforcing cycle that fosters academic success, while a misalignment might lead to suboptimal results. As such, comprehending the dynamics of this relationship among postgraduate students can yield valuable insights for educators, institutions, and policymakers to design targeted interventions that enhance academic performance and promote holistic development.

Thus, the present study endeavors to explore the prediction and relationship between motivation, encompassing intrinsic and extrinsic goal orientation and task value, and learning strategies, encompassing control of learning beliefs, rehearsal, elaboration, organization, meta-cognitive self-regulation, time and study environment management, effort regulation, peer learning, and help-seeking, in shaping the academic outcomes of postgraduate students. By delving into this intricate web of variables, this research aims to contribute to the existing body of knowledge, bridging the gap in the literature and guiding the cultivation of enriched educational experiences that propel postgraduate students toward realizing their fullest potential and academic aspirations. The study aims to

examine the prediction/relationship between motivation (intrinsic goal orientation, extrinsic goal orientation, task value), learning strategies (control of learning beliefs, rehearsal, elaboration, organization, meta-cognitive self-regulation, time and study environment management, effort regulation, peer learning, and help-seeking) and academic achievement of postgraduate students.

Research Questions: The following research questions guided the study

1. To what extent do motivation and learning strategies of intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs, rehearsal, elaboration, organization, meta-cognitive self-regulation, time and study environment management, effort regulation, peer learning, critical thinking and help-seeking jointly predict academic achievement of postgraduate students

2. What are the relative predictive contributions of motivation and learning strategies of study strategies of intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs, rehearsal, elaboration, organization, meta-cognitive self-regulation, time and study environment management, effort regulation, peer learning, critical thinking and help-seeking on academic achievement of postgraduate students

Hypotheses: To guide this study, two null hypotheses were tested at a 0.05 level of significance:

1. The combination of motivation and learning strategies of intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs, rehearsal, elaboration, organization, meta-cognitive self-regulation, time and study environment management, effort regulation, peer learning, critical thinking and help-seeking jointly, do not significantly predict postgraduate students' academic achievement

2. There are no significant predictive contributions of motivation and learning strategies of intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs, rehearsal, elaboration, organization, meta-cognitive self-regulation, time/study environment management, effort regulation, peer learning, critical thinking and help-seeking independently on post-graduate students' academic achievement

3. Methodology

Ethics Committee Approval is not required as this falls within the scope of regulations announced by the National Department of Health in 2007, which exempts research involving educational testing and research from formal ethical approval requirements, and since the data is based on 2015-16. All responsibility belongs to the researchers.

3.1. Research design

The correlation design, using multiple predictions, was used as the research design for the study. According to Kpolovie (2010), correlation research is a method used to determine the strength and direction (positive or negative) of a relationship between a dependent variable (also known as a criterion variable) and one or more independent variables (predictor variable), it examines the relationship between one dependent variable and two or more independent variables using the least-squares associate principle.

3.2. Population and sample

The study population comprises 2503 postgraduate master's students enrolled for 2015/2016 postgraduate programs at the University of Port Harcourt (Postgraduate school). The researcher chose to use doctoral students for the study because they are presumed to be more mature and have developed some individualized learning strategies during their undergraduate programs. The sample/ study group consisted of 333 students (196 males representing 59% and 137 females representing 41%) drawn using a multi-stage sampling procedure. In the first stage of the research procedure, a simple random sampling technique (balloting) was used to select four faculties out of twelve (12) at the University of Port Harcourt. In the second stage, simple random sampling (throw of a coin) was used to draw six (6) departments from the four (4) faculties. In the third stage, disproportionate stratified random sampling based on gender was used to pull 333 students. The age of the study group ranged from 24-50 years.

3.3. Data collection tools

The researcher adapted one instrument for data collection, the Motivated Strategies for Learning Questionnaire (MSLQ) by Pintrich et al. (1991). The Motivated Strategies for Learning Questionnaire (MSLQ) is a self-report instrument designed to assess University students' motivational orientations and their use of different study strategies for a college course. The MSLQ is based on a general cognitive view of motivation and learning strategies.

There are two sections to the MSLQ: a motivation section and a learning strategies section. The researcher reviewed all the items in the instruments and selected 66 items out of 81 items for the study. The instrument had 17 items measuring motivation (intrinsic goal orientation, extrinsic goal orientation, task value), 49 items eliciting information on students' use of different cognitive, meta-cognitive strategies, resource management peer helping and help-seeking strategies (control of learning beliefs, rehearsal, elaboration, organization, meta-cognitive self-regulation, time and study environment management, effort regulation, peer learning, and help-seeking). Responses to each question were rated on a seven-point (7-point) Likert scale from "not at all true of me" to "very true of me". Furthermore, the researcher drafted a proforma and used it to collect the participants 'CGPAs from their various departments, constituting their academic achievement.

3.4. Validity and reliability of the instrument

The Motivated Strategies for Learning Questionnaire (MSLQ) instrument was re-established for validity and reliability to fit the current study on a sample of 20 respondents; these instruments were pilot-tested even though they had already been validated by the developers of the original instruments from which they were adapted. Drafts of the instruments, along with the research questions and study's hypotheses, were given to measurement and evaluation specialists and educational psychologists to have their opinions on the instruments' content, usefulness, thoroughness, clarity, and literacy requirements to determine their face and content validity. The Construct validity was determined by correlating each sub-scale total score with the total score of motivated strategies for the MSLQ. These scores were correlated using Pearson product-moment correlation, and a correlation coefficient of .813 for extrinsic goal orientation, .838 for intrinsic goal orientation, .807 for task value, .755 for control of learning beliefs, .758 for rehearsal, .794 for elaboration, .650 for organization, .841 for metacognitive self-regulation, .893 for time/study environment management, .625 for effort regulation, .625 for effort regulation, .819 for peer learning, .514 for help-seeking, and .859 for critical thinking. All these indicate a high positive correlation. This also accounted for the reliability of the instrument. To further establish the instrument's reliability, Cronbach's alpha reliability method was used, and a Cronbach alpha reliability coefficient of 0.929 was obtained for a motivated strategy for the learning questionnaire. This result indicates a high internal consistency rehearsal.

3.5. Data analysis

Ethics was taken into consideration in the course of the research. All respondents were provided with comprehensive information about the research objectives, procedures, and the nature of the instruments they would be asked to respond to. Before their participation, respondents were requested to provide informed consent, indicating their willingness to participate voluntarily. Respondents were assured that their information would be treated with the utmost confidentiality. They were explicitly informed that their responses would be used solely for research purposes and would not be disclosed to unauthorized parties. Additionally, the data collected was anonymized through coding to protect the respondents' identity further. The collected data, including coded information, was stored on secure computer systems with restricted access. Only authorized researchers had access to these systems, and stringent security measures, such as strong passwords and firewalls, were employed to prevent any unauthorized access or breaches.

The data obtained was cleaned, and a normality test was carried out. The test showed the skewness coefficient to be .98 while the kurtosis coefficient was .752. This test result showed that the distribution for the study did not fall outside the range of normality, so the distribution was considered normal. These statistical data depict the normal distribution of the scores (George & Mallery, 2010; Hair et al., 2010, 2022; Tabachnick & Fidell, 2013). The data for the study fulfilled the assumption of normal distribution. Therefore, research questions were answered using simple and multiple regression analysis. At the same time, the hypotheses were tested using simple and multiple regressions associated with ANOVA at a significant level of .05. All these analyses were conducted through Statistical Package for the Social Sciences (SPSS) version 21.

4. Results

Research Questions 1: To what extent do motivation and learning strategies of intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs, rehearsal, elaboration, organization, meta-cognitive self-regulation, time and study environment management, effort regulation, peer learning, critical thinking and help-seeking jointly predict academic achievement of postgraduate students. Multiple Regression Analysis of the joint prediction/contributions of motivation and learning strategies of intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs, rehearsal, elaboration, organization, meta-cognitive self-regulation,

time/study environment management, effort regulation, peer learning, critical thinking and help-seeking on post-graduate students' academic achievement.

Table 1. Multiple regression analysis

Model	R	R Square	Adjusted R Square
1	.833[a]	.694	.682

According to the results in Table 1, motivation and learning strategies of intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs, elaboration, organization, meta-cognitive self-regulation, time and study environment management, effort regulation, peer learning, critical thinking and help-seeking jointly has an R-value of .833 indicating that there is a very high positive relationship between these learning strategies and post-graduate students' academic achievement. It shows an R^2 change of .694, indicating that these learning strategies jointly account for 69% of the proportion of variation in postgraduate students' academic achievement. This data suggests that motivation (intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs) and learning strategies (elaboration, organization, meta-cognitive self-regulation, time and study environment management, effort regulation, peer learning, critical thinking, and help-seeking) jointly increases, academic achievement is predicted to grow as well, and vice versa.

Hypotheses 1: The combination of motivation and learning strategies of intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs, rehearsal, elaboration, organization, meta-cognitive self-regulation, time and study environment management, effort regulation, peer learning, critical thinking and help-seeking jointly, do not significantly predict postgraduate students' academic achievement

Table 2. ANOVA associated with multiple regression analysis

	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	31.326	13	2.410	55.734	.000[b]
1	Residual	13.792	319	.043		
	Total	45.118	332			

ANOVA Associated with Multiple Regression Analysis of the joint prediction/contributions of motivation and learning strategies of intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs, rehearsal, elaboration, organization, meta-cognitive self-regulation, time/study environment management, effort regulation, peer learning, critical thinking and help-seeking on post-graduate students' academic achievement

ANOVA associated with multiple regression, as shown in Table 2 reveals an F – value of 55.734 df = (319) P. 000 <.05. Therefore, the null hypothesis that the combination of motivation and learning strategies of intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs, rehearsal, elaboration, organization, meta-cognitive self-regulation, critical time and study environment management, effort regulation, critical thinking, peer learning and help-seeking jointly, do not significantly predict postgraduate students' academic achievement is rejected and the alternate accepted. This implies that motivation (intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs) and learning strategies (elaboration, organization, meta-cognitive self-regulation, time and study environment management, effort regulation, peer learning, critical thinking, and help-seeking) jointly predicts post-graduate students' academic achievement significantly. This statistically significant prediction of these learning strategies jointly with p < 0.05 is implausible to have occurred by chance. In other words, this positive relationship and prediction is genuine and not due to random variation.

Research Questions 2: What are the relative predictive contributions of motivation and learning strategies of study strategies of intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs, rehearsal, elaboration, organization, meta-cognitive self-regulation, time and study environment management, effort regulation, peer learning, critical thinking and help-seeking on academic achievement of postgraduate students

Hypotheses 2: There are no significant predictive contributions of motivation and learning strategies of intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs, rehearsal, elaboration, organization, meta-cognitive self-regulation, time/study environment management, effort regulation, peer learning, critical thinking and help-seeking independently on post-graduate students' academic achievement

Simple regression analysis of the prediction/contributions of motivation and learning strategies of intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs, rehearsal, elaboration, organization,

meta-cognitive self-regulation, time/study environment management, effort regulation, peer learning, critical thinking and help-seeking independently on post-graduate students' academic achievement

Table 3. Simple regression analysis

Motivation & Learning Strategies	R	R Square	B	t	Sig
Intrinsic Goal Orient	.817	.667	.060	25.73	.000
Extrinsic Goal Orient	.717	.514	.055	16.69	.000
Task Value	727	.529	043	19.26	.000
Control of Learning Belief	.692	.478	.050	17.42	.000
Rehearsal	.687	.472	.050	17.19	.000
Elaboration	.624	.389	.031	14.51	.000
Organizing	.668	.446	.045	16.33	.000
Self-Regulation	.743	.552	.021	20.17	.000
Time/study Environ	.671	.450	.023	16.44	.000
Effort Regulation	.539	.290	.037	11.62	.000
Critical Thinking	.737	.544	.043	19.86	.000
Peer Learning	.161	.026	.016	2.969	.003
Help Seeking	.595	.354	.044	13.47	.000

According to the results in Table 3, Intrinsic goal orientation has an R-value of .817, indicating a very high positive relationship between intrinsic goal orientation and postgraduate students' academic achievement. It shows an R^2 change of .667, indicating that inherent goal orientation accounts for 66% of the proportion of variation in postgraduate students' academic achievement. This data suggests that as Intrinsic Goal Orientation increases, academic achievement is also predicted to grow, and vice versa. The table shows that Extrinsic goal orientation has an R-value of .717, indicating a high positive relationship between extrinsic goal orientation and postgraduate students' academic achievement. It shows an R^2 change of .514, indicating that extrinsic goal orientation accounts for 51% of the proportion of variation in postgraduate students' academic achievement. It further shows that task value has an R-value of .727, indicating a highly positive relationship between task value and doctoral students' academic achievement. It shows an R^2 change of .539 five hundred twenty-nine, indicating that task value accounts for 52% of the proportion of variation in postgraduate students' academic achievement. It further shows that control of learning belief has an R-value of .692, showing a high positive relationship between control of learning belief and academic achievement. It also shows an R^2 change of .478, showing that control of learning belief accounts for 47% of the proportion of variation in postgraduate students' academic achievement. The table also reveals that rehearsal has an R-value of .687, showing a positive relationship between it and academic achievement. It also shows an R^2 change of .472, which accounts for 47% of the variation in postgraduate students' academic achievement. The table also reveals that organizing has an R-value of .684, showing a positive relationship between it and academic achievement. It also shows an R^2 change of .389, accounting for 38% of the variation in postgraduate students' academic achievement. The table also reveals that Elaboration has an R-value of .624, showing a positive relationship between it and academic achievement. It also shows an R^2 change of .446, which accounts for 44% of the variation in postgraduate students' academic achievement.

The table shows that self-regulation as a learning strategy has an R-value of .743, showing a positive relationship between self-regulation as a learning strategy and academic achievement. It also shows an R^2 change of .552, accounting for 55% of the variation in postgraduate students' academic achievement. The table also shows that time and study environment have an R-value of .671, showing a high positive relationship between it and academic achievement. It also shows an R^2 change of .450, showing that it accounts for 45% of the proportion of variation in postgraduate students' academic achievement. Effort regulation has an R-value of .539, showing a high positive relationship between it and academic achievement. It also shows an R^2 change of .290, which accounts for 29% of the variation in postgraduate students' academic achievement. Effort regulation has an R-value of .737, showing a high positive relationship between it and academic achievement. It also shows an R^2 change of .544, accounting for 54% of the variation in postgraduate students' academic achievement. Peer learning has an R-value of .161, showing a low positive relationship between it and academic achievement. It also shows an R^2 change of .026, showing that it accounts for 2.6% of the proportion of variation in postgraduate students' academic achievement. Help-seeking has an R-value of .595, showing a high positive relationship between it and academic achievement. It also shows an R^2 change of .394, accounting for 39% of the variation in postgraduate students' academic achievement.

The beta value further gives information on the relative contribution of each of these learning styles on the academic achievement of postgraduate students. It shows that Intrinsic goal orientation, with a beta value of .060,

has the highest independent contribution to postgraduate students' academic achievement, followed by extrinsic goal orientation, with a beta value of .055; this is simultaneously followed by control of learning belief and rehearsals, both with beta values of 050. This is followed by organizing's contribution with a beta value of .045, then help-seeking with a beta value of .044, task value, and critical thinking with the same beta value of .043. This is followed by effort regulation with a beta value of .037, then by elaboration with a beta value of .031, then time and study environment with a beta value of .023, and lastly by self-regulation learning strategy with a beta value of .021, having the lowest contribution.

The t-test associated with the simple regression analysis shows that all the motivation and learning strategies independently significantly predict the academic achievement of postgraduate students as they all had $p < 0.05$. Therefore, the null hypothesis that there is no significant prediction of intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs, rehearsal, elaboration, organization, meta-cognitive self-regulation, time/study environment management, effort regulation, peer learning, critical thinking and help-seeking independently on postgraduate students' academic achievement is rejected and the alternate accepted. This implies that intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs, rehearsal, elaboration, organization, meta-cognitive self-regulation, time/study environment management, effort regulation, peer learning, critical thinking, and help-seeking independently significantly predict postgraduate students' academic achievement. This shows that these statistically significant predictions of these learning strategies independently with a p-value (Sig) less than 0.05 are improbable to have occurred by chance. In other words, the positive relationship and prediction are real and not due to random variation.

5. Discussion

The result shows that motivation (intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs) and learning strategies (elaboration, organization, meta-cognitive self-regulation, time and study environment management, effort regulation, peer learning, critical thinking, and help-seeking) jointly predicts postgraduate students' academic achievement significantly. This finding aligns with previous research (Ahmed et al., 2016; Crede & Philip 2012; Dalgıç et al., 2024; Demir & Demir, 2014; Demir et al., 2023; Lynch 2010; Mirzaei-Alavijeh et al., 2019; Muwonge et al., 2019; Nabizadeh et al., 2019; Neroni et al., 2019; Pokay & Blumenfeld, 1990; Obrent 2012; Schneider & Preckel 2017; Ulstad et al., 2016; Wild & Neef,2023; Yusof et al., 2021) which showed that motivation and learning strategies significantly relates and predicts academic achievement. This is also somewhat at variance with the study of Creede & Philip (2011), where their results showed that strong relationships were found between individual grades (academic achievements) and effort regulation, time and study environment management, and metacognitive self-regulation while the remaining learning strategies proved to be unrelated to academic performance. The slight variance could be the difference in the sample demographics and location of the studies. This study result highlights the potential role of these learning strategies in enhancing and improving learning outcomes and students' success. The prediction and high positive relationship between these learning strategies and academic achievement can be explained by several factors.

Motivation factors such as intrinsic and extrinsic goal orientation reflect students' motivations for learning. When students have a strong desire to learn (intrinsic motivation) and are also driven by external rewards (extrinsic motivation), they tend to judge course contents as attractive, practical, and essential (task value) and believe that their efforts to learn will result in positive outcomes; thus they are more likely to invest effort and perform well academically. More so, the various learning strategies like cognitive strategies like rehearsal, elaboration, organizing, and critical thinking and meta-cognitive learning strategies like self-regulation enhance students' ability to comprehend, retain, and apply knowledge effectively. These strategies help students become more efficient and effective learners. Other learning strategies like effective time management and a conducive study environment can optimize the learning process, allowing students to focus on their studies and reduce distractions as well as effort regulation, which can help students monitor and adjust their effort based on the perceived difficulty of the task can lead to better performance academically. Furthermore, collaborative learning with peers and help-seeking can lead to a deeper understanding of the subject matter through discussions, assistance from peer teaching, and shared insights by postgraduate students. The joint prediction and relationship between motivation and learning strategies create a synergy that promotes academic achievement. Motivated students are more likely to seek out and implement effective learning strategies. In contrast, these strategies, in turn, can reinforce and sustain motivation, ultimately increasing students' academic achievement.

Intrinsic and extrinsic goal orientation as motivational learning strategies independently significantly predicts academic achievement. This aligns with the research findings of (Bulus, 2011; Chyung et al., 2010; El-Adl &

Alkharusi 2020). Intrinsic goal orientation, characterized by a genuine passion for learning and personal growth, emerged as a strong predictor of academic achievement. Postgraduate students who are internally motivated tend to excel academically. Students with a solid intrinsic goal orientation are more likely to be engaged in their studies, actively seek out information, and persist in facing challenges. This inherent motivation positively impacts their academic achievement, similar to extrinsic goal orientation, while still a form of motivation driven by external rewards such as grades or recognition. Students with a high extrinsic goal orientation may perform well academically to achieve these rewards, which can lead to higher academic achievement. The result also shows that task value as a motivational learning strategy independently significantly predicts academic achievement and relates with it. This aligns with the research findings of (Al-Harty et al., 2011; Bulus, 2011; Chyung et al., 2010; El-Adl & Alkharusi 2020). This result could be because when students see the value in their learning, they are more likely to be motivated and put in the effort to succeed, resulting in higher academic achievement. The result shows that controlling learning beliefs as a motivational learning strategy relates to and independently predicts academic achievement. This is in tandem with research findings (Bulus, 2011; Chyung et al., 2010; El-Adl & Alkharusi, 2020). Believing control over one's learning processes can lead to better study habits and strategies. Students who feel in control are more likely to manage their learning actively, leading to improved academic achievement.

The result reveals that rehearsal as a cognitive learning strategy relates to and independently significantly predicts academic achievement. This agrees with the research findings of Nabizadeh et al. (2019). Rehearsal is a cognitive strategy involving repetition and memorization. Students who use effective rehearsal techniques can better retain information and perform well in exams, which is positively related to academic achievement. The result shows that organizing as a cognitive learning strategy relates to and independently significantly predicts academic achievement. This aligns with the research findings of Akyol et al. (2010) and Nabizadeh et al. (2019). Organizing information and study materials helps students create a structured study approach. When students can effectively organize their learning, they can manage their time and resources efficiently, leading to improved academic performance. The result suggests that elaboration as a cognitive learning strategy relates to and independently significantly predicts academic achievement. This is in tandem with the research findings of Akyol et al. (2010) and Nabizadeh et al. (2019). Elaboration involves connecting new information to existing knowledge and concepts. This cognitive strategy enhances understanding and material retention, increasing academic achievement. The result suggests that critical thinking as a cognitive learning strategy relates to and independently significantly predicts academic achievement. This is in tandem with the research findings of Nabizadeh et al. (2019) and Sabri et al. (2019). Students who are critical thinkers are better able to apply previous knowledge to new situations to solve problems, reach decisions, or make critical evaluations of ideas or concerning standards of excellence and thus achieve high

Metacognitive self-regulation as a metacognitive learning strategy relates to and independently significantly predicts academic achievement. This is in tandem with research findings (Al-Harty et al., 2011; Akyol et al., 2010; Crede & Philip, 2011; Kizilcec et al., 2017; Nabizadeh et al., 2019). Students who practice self-regulation are better equipped and able to set goals, monitor progress, adjust study strategies accordingly, manage time, stay focused, and achieve higher academic success. Furthermore, the result shows that time and study environment as resource management learning strategies relate and independently significantly predict academic achievement. This is in tandem with the research findings of Neroni et al. (2019), where time and effort management were the strongest significant positive predictors of academic performance. This is the same as the significant relationship that was found by Crede and Philip (2011), Cheema et al. (2018), and Schneider and Preckel (2017). This is also the same as that of Cheema et al. (2018). Effective time management and a conducive study environment are essential for academic success. Students who allocate their time wisely and create a distraction-free study space are likelier to perform well. The result suggests that effort regulation as a learning strategy relates to and independently significantly predicts academic achievement. This is in tandem with the research findings of ((Cheema et al., 2018; Ulstad et al., 2016). Effort regulation is the ability to sustain effort and maintain motivation during learning. Students who can regulate their efforts are likelier to persist through challenges, leading to improved academic outcomes.

The result reveals that peer learning as a learning strategy relates to and independently significantly predicts academic achievement. This is in tandem with the research findings of Akyol et al. (2010) and Nabizadeh et al. (2019). Peer learning, while still positively related to academic achievement, has a relatively low contribution compared to other strategies. Interacting with peers can enhance understanding through discussion and collaboration, although its impact may vary. The result further suggests that help-seeking as a learning strategy relates to and independently significantly predicts academic achievement. This is in tandem with the research findings of

Ulstad et al. (2016). Seeking help when faced with challenges or difficulties is an important learning strategy. Students not afraid to seek assistance when needed are more likely to overcome obstacles, contributing to better academic performance.

6. Conclusion

It is concluded that various learning strategies significantly predict, relate to, and contribute to the academic achievement of postgraduate students. These findings highlight the complex interplay between different learning strategies and their impact on academic achievement.

6.1. Theoretical and practical implications

Theoretically, this study's findings have implications for strengthening the existing theoretical models that emphasize the influence of motivation and learning strategies on academic achievement. The result aligns with prominent motivational theories such as Self-Determination Theory (SDT) and Expectancy-Value Theory (EVT). It suggests that students' intrinsic and extrinsic goal orientations, perceived task value, and control of learning beliefs are crucial in determining their academic achievement. The finding supports SDT's proposition that intrinsic motivation, driven by internal satisfaction and interest in learning, leads to higher academic performance. Extrinsic motivation, stemming from external rewards or punishments, also influences achievement outcomes, as reflected by extrinsic goal orientation. Furthermore, this study's finding substantiates EVT, which posits that individuals' expectations of success and the perceived value of a task influence their motivation and subsequent performance. The study's result corroborates this theory by highlighting the predictive power of task value in postgraduate students' academic achievement. Theoretical implications extend to Cognitive Load Theory (CLT, suggesting that effective learning strategies, such as elaboration, organization, and meta-cognitive self-regulation, optimize cognitive resources, thereby enhancing academic outcomes. These strategies facilitate deeper information processing, leading to improved retention and application of knowledge.

The study's practical implications extend to educational practices, emphasizing the importance of fostering intrinsic motivation through engaging lessons and providing external rewards for extrinsic motivation. Implementing interventions that promote effective learning strategies, such as self-regulation and peer learning, can enhance academic outcomes. From a pedagogical perspective, the findings suggest the need for educators to tailor instructional methods to accommodate diverse learning styles and preferences. Educators can enhance task value and promote engagement by aligning course content with students' interests and career aspirations. This also includes integrating technology into teaching and assessment practices and creating collaborative learning environments to support students' cognitive development and motivation.

Practically, Institutions can offer professional development workshops for educators to enhance their understanding of motivational theories and effective teaching strategies. Equipping educators with the knowledge and skills to create motivating learning environments and provide constructive feedback can positively impact students' academic achievement. Another implication of this study is that educational institutions can expand student support services to include counseling, academic advising, and mentoring programs that address motivational issues and learning strategy development. By providing individualized guidance and support, institutions can empower students to set goals, overcome challenges, and succeed academically.

6.2. Limitations and suggestions for further study

Educators should nurture intrinsic and extrinsic motivation by designing engaging lessons, emphasizing task value, teaching self-regulation, and promoting effective cognitive strategies. They should support students in creating productive study environments, encourage peer learning, and foster a culture of help-seeking. Individualized guidance and timely feedback are essential. Students should cultivate intrinsic motivation, set clear goals, understand task value, practice self-regulation, and employ effective cognitive strategies. Creating a conducive study environment, engaging in peer learning, seeking help when needed, reflecting on and adjusting study habits, and maintaining persistence are crucial for success. Educational institutions should invest in faculty development, offer academic advising, establish resource centers for study skills, promote peer learning, and continuously assess and improve teaching methods and support services.

Although the research achieved its aim, it is limited by not using a larger sample size from a more diverse geographical location as it was conducted with a specific group of postgraduate students from a particular institution. Also, the accuracy of results may be affected by students' self-reported information, which may only sometimes be truthful. Although the following limitations notwithstanding, a representative sample was obtained, and

the findings were not affected; thus, valid generalization is enabled. It is suggested that longitudinal studies that track postgraduate students over an extended period be conducted to understand how motivation and learning strategies evolve and influence academic achievement throughout their academic journeys. Given the growing prevalence of digital education, future research can also be conducted on the role of motivation and learning strategies in online and blended learning settings.

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Author contribution statements

The authors equally contributed to the research design and implementation, analysis, and the manuscript's writing.

Disclosure statement

The authors reported no potential competing interest.

Ethics committee approval

Ethics Committee Approval is not required as this falls within the scope of regulations announced by the National Department of Health in 2007, which exempts research involving educational testing and research from formal ethical approval requirements, and since the data is based on 2015-16. All responsibility belongs to the researchers.

The journey we have begun: How democracy could bear fruit for all?

Harun Abubakar Siddique

The journey we have begun: How democracy could bear fruit for all?

Harun Abubakar Siddique[1]

[1]*Geneva Graduate Institute, Switzerland, Email: harun.abubakarsiddique@gmail.com, ORCID: https://orcid.org/0000-0001-6037-7895*

Article Info	Abstract
Research Article *Received: 29 December 2023* *Revised: 22 March 2024* *Accepted: 22 March 2024* **Keywords:** *Democracy,* *Ethnicity,* *State of nature,* *People and government*	*This article delves into the fundamental questions of whether democracy, when left unchecked, can provide the best form of governance and whether a minority can exploit it to suppress the rights and freedoms of others. By examining these questions in detail, the article offers insights into refining democratic systems of governance, which prioritize the wide participation of the populace instead of allowing a select few to dictate the nation's affairs. Drawing from practical examples involving racial and ethnic diversity, such as the United States, Malaysia, Indonesia, and Ethiopia, the paper argues that democracy can be co-opted by a particular race or ethnicity to advance its interests, often at the expense of marginalized groups. Addressing this issue practically is more feasible than resolving it theoretically, as theoretical approaches tend to overlook the complexities of race and ethnicity in democratic systems.*

1. Introduction

With the rise of populism, the globe experiences the flaws of democracies. It is mind-boggling that a country considered to be a trailblazer of democracy would experience such a horrific incident as the 'besieging' of the Capitol on January 6th, 2021. This raises the question of whether democracy can provide the best form of governance when left to its own devices. Moreover, can democracy be a tool that a handful of the population could exploit to suppress the freedoms and rights of others? This paper addresses both questions and mentions ways to refine our democratic governance systems. Since democracy is a system that encourages broad participation of the populace rather than being controlled by a select few, it is crucial to explore avenues for improvement.

When a territory full of people becomes independent or has an epiphany in its years of struggles with how best the people must be governed, it turns to democracy. It is common sense to have such a turn. In a democratic regime, everyone presumably contributes to the territory's governance, not just a handful of intelligent heads. In a democracy, no one is above the law (or so it must be); therefore, people are accorded the same respect and treated equally. But who knows what democracy looks like? Or what it is. If it were to be mentioned in the scriptures, there would not be many scuffles over which country is democratic and which is not. Perhaps Providence would have given man a checklist of what constitutes democracy if democracy found its way into the holy books, but nay! With Providence's unparalleled wisdom, we would have measured up with what is ought of us in terms of democratic means to understand who is trailing the path of democracy and who is not. Every country claims to be a suitor of democracy, but democracy has claimed nothing. In fact, who speaks on behalf of democracy? How do we know one country is democratic while the other is not?

Can democracy exist in opposition to people? hypothetically, or not? Since democracy is the government or rule of the people as its Greek etymological origins suggest, "*demo,*" meaning people, and "*Kratos*" meaning to rule, the question posed investigates whether the inclinations of democracy could be at all opposed to what the people want. The people might want *A,* and the gears of democracy want *B*. Is this possible? The paper will answer in the affirmative. That is what the French political theorist Alexis de Tocqueville, after his diagnosis of the new American democracy, warned against the "tyranny of the majority" (more on this later). To give the question a practical flesh, we will say because of the availability of races and ethnicities, making the workings of democracy

very difficult, democracy could be hijacked by a race (the case of the US) or ethnicity (the case of most developing countries) to advance its cause and oppose some people within the country, like the white against blacks (and of course other race like Latinos) in the US or the Malays against other ethnicities in Malaysia or Indonesia, Oromo against other ethnicities in Ethiopia. From this practical point of view, the question becomes simpler to tackle; if it remains in its theoretical form, it becomes almost impossible to answer. Unfortunately, one of the failings of theoretical work in democracy literature is the primary philosophical diagnosis without factoring in the issue of race and ethnicity. Political theorists like John Locke, Rousseau, Hobbes, etc. spoke about the "*state of nature*" as the foundation of the emergence of civil government without even considering the bonds between humans, the issue of ethnicity, race, tribe, etc. It will be difficult for humans to look beyond their affiliations (or so it seems) in the context of civil government. If the question is answered in this light (without considering affiliations), it becomes problematic, for the question to be tackled would be, what is the meaning of "people" in the question in the first place? Is it everyone, a group, a race, ethnicity, etc.?

Following this introduction will be several parts tackling the issue of democracy working in opposition to "people." First, the paper considers the foundations of government, both with its theoretical and practical cloak. It turns to the issue of who gets to define the term democracy. It will then consider the practical issue of the workings of democracy in opposition to "people", with historical examples such as the US case where women and blacks were denied voting rights. Significantly, it will turn to some means of refining democracy to ameliorate the inner failings of contemporary democratic methods by mentioning deliberative and agonistic democratic procedures. To avoid making this paper bereft of practical contemporary examples, it will consider one of the unique examples of a country with a seemingly strange democratic government, Lebanon. The paper chose the US and Lebanon because of their similarities in demographic and political diversity despite the differing nature of this diversity. Both nations are melting pots: in the U.S., diversity is primarily racial, encompassing groups like Native Americans, Whites, Blacks, and Latinos, among others. In Lebanon, it is largely religious, with groups such as Shia and Sunni Muslims, Maronite and Catholic Christians, Druze, and more. At the heart of democracy is the principle of aggregating a diverse populace's views through the country's governance. This racial or religious diversity poses unique challenges to democratic governance. Therefore, both the U.S. and Lebanon provide pertinent case studies to explore how democracy might be manipulated by a select few, leading to a scenario where the mechanisms of democracy could potentially function contrary to the interests of the general populace. The paper concludes with how democracy could be strengthened and the way forward.

2. Methodology

All responsibility belongs to the researchers. Ethics committee approval is not required as this study did not collect data on humans using experiments, methods, practices, etc.

This study employs a comparative and interdisciplinary approach to examine the efficacy of democracy as a system of governance and its potential exploitation by minority groups. Drawing from practical examples in nations such as the United States, Lebanon, etc., the research investigates how democracy interacts with issues of racial, religious, and ethnic diversity. Primary data sources include historical records and empirical studies on democratic governance and minority rights. Qualitative analysis techniques, including thematic analysis and discourse analysis, will be utilized to explore patterns and themes in the literature on the studies of democracy. Additionally, this study will incorporate insights from political theory and philosophy, particularly the works of Locke, Rousseau, Hobbes, and other relevant thinkers, to contextualize the findings within theoretical frameworks. Overall, this methodology aims to provide a comprehensive understanding of the challenges and opportunities for refining democratic systems to prioritize widespread participation and protect the rights of marginalized groups.

3. Foundations of government

"Man was born free but everywhere in chains," the first sentence of Rousseau's text Social Contract (1762, p. 1), gives the idea of forming what we have now as civil government. In their foundational works, 'Social Contract' (1762) by Rousseau, 'Two Treatises on Government' (1690) by Locke, and 'Leviathan' (1651) by Hobbes, these political theorists delve into the concept of the *state of nature* as a key element in the development of civil political societies. This *state of nature* represents a time in human history when there was no established authority over individuals, allowing each person the freedom to live according to their judgment and preferences. This is the natural state of being unless Providence appoints an authority over man; man had no power or obligation to subject another man to his authority or the obligation to perform a deed out of fulfilling the requirement of belonging to a society (Locke, 1690).

The phrase, Man was born free,… captures this understanding. It uses the auxiliary verb "*was*" in the past to mean that freedom was once available, i.e., in the *state of nature*. If it chooses to use the present tense "*is,*" it *suggests that newborn children are free* during birth until they consent to join political societies. However, this exegesis is an overstretch since the child does not get to choose where to be born and is automatically under the political society where his or her parent birthed him or her.

Locke further differentiates between the *state of nature* and the *state of war* to provide a deeper understanding of how the formation of civil government came into being. Suppose a man is in a state of nature where no one man has authority over the other. In that case, there will always be the propensity for the strong to subjugate the weak under their authority without the explicit consent of the weak. This struggle between the weak and the strong, one escaping being subjected and the other endeavoring to overpower the other, puts them in a state of war. Locke (1690, p.108) sums it up as follows;

> *Men living together according to reason, without a common superior on earth, with authority to judge between them, is the state of nature properly. But force, or a declared design of force, upon the person of another, where there is no common superior on earth to appeal to for relief, is the state of war.*

According to Rousseau (1762), there comes a time when the strength of the individual man in the *state of nature* cannot subdue the vagaries and obstacles of life. Therefore, joining forces together to achieve a significant collective goal becomes essential. This goal at once preserves the individual's life and property and does not dissipate the individual's rights and liberties. From this, political societies are birthed. Locke and Rousseau share similar opinions on the necessity and the raison d'etre of civil societies, i.e., preserving individual rights, freedoms, and property. These civil societies give obligations to the individual and give voice to the majority in the fold of carrying out decisions for the benefit of the collective or general will, as Rousseau calls it. The individual or private will is now subjugated to the general will of the newly-born civil society. Even before the creation of civil societies among men, the family was considered the first unit of government or the embryo of civil societies. The word *Economy*, the management of the state's resources, as its contemporary meaning suggests, comes from the two Greek words, "*Oikos,*" meaning house, and "*nomos,*" meaning law, "originally meant only the wise and lawful government of a household for the common good of the whole family," Rousseau (1999) mentions. Therefore, it is a fair assessment that the growth of a civil government began with the family.

Regarding the question of the forms of the commonwealth (or government, as it is broadly understood), according to Locke (1692), since the majority within the newly created community moves the levers of power in terms of legislating and executing laws, it is consistent with the purpose of the commonwealth, this form of doing things is known as Perfect Democracy. When authority is vested in a few individuals, it is known as an oligarchy, while the concentration of power in a single person is termed monarchy, among other forms.

Who would not want a perfect democracy? That is the pinnacle of the democratic system of government. Here, everyone participates (eligible members) directly in governing the affairs of the commonwealth (the commonwealth is the independent community formed after eschewing the *state of nature*; it has no form of government yet). The concept of Representatives (deputies), which Rousseau (1762) abhors, has now become the familiar practice of the contemporary political arrangement of the state. "The weakening love of country, the energy spent on private interests, the immense size of the state, conquests, and the abuse of government, have suggested the idea of having deputies or representatives of the people in national assemblies." And, "through being lazy and having money, they end up with soldiers to oppress their country and representatives to sell it," Rousseau (1762) mentions. For him, "sovereignty cannot be represented, for the same reason it cannot be transferred: it consists in the general will, and the will cannot be represented" (Rousseau, 1762).

Whatever it may be, for good or worse, the globe is replete with representative democracies now. It is implicitly assumed in such a system that every eligible person has a stake in the state in which he or she lives and by choosing a representative, since it has become the necessity of our time given the sizes of states, delegate and vest in their representatives the power to legislate (in the case of the assemblies) and execute (in the case of the executive arm of government) laws of the state.

3.1. Governing (democracy) in practice

The foregone pages dealt with the foundations of government as it is considered in the political theoretical knowledge of statehood and governance. However, a huge unfortunate disparity exists between theory and practice regarding statehood and governance. One glaring failing of the political philosophical exegesis mentioned is the silence on the issue of affiliations in terms of race or ethnicity. The obvious affiliation recognized is that of the

family; nothing else is mentioned. It is assumed that humans will be sensible, consider themselves equal, eschew all affiliations, and respect the General Will or the good of the Commonwealth. Rousseau (1762), however, touches a little bit on the affiliation issue when he mentions the "corporate will" of those in the servitude of the government. That is, government officials have three wills: the private will, the corporate will, and the General will. Unfortunately, this is just it. It does not touch on ethnicity or difference in race. This is understandable because the rise of pluralism, or the multicultural form of the state, is a much later phenomenon. Therefore, failing to capture the idea of multiculturalism in the aforementioned theory on statehood and governance.

To illustrate this more clearly, consider the findings of Schwartz and Jaquelyn from Harvard T. H. Chan School of Public Health (2020), which indicate that Black Americans face a 3.23 times higher risk of police-related fatalities compared to White Americans. The situation is even more stark in Chicago, where Black residents are over 650% more likely to be killed than their White counterparts (Schwartz & Jaquelyn, 2020). Additionally, a separate study by Vikram (2023) highlights that in the UK, Black individuals are seven times more likely to die after being restrained by the police compared to White individuals.

Why are these statistics concerning? Because it shows that people suffer not because they belong to the commonwealth but because of their affiliations (here, their skin color depicts their blackness). In some developing countries in the African and Asian continents, people are denied basic amenities because they belong to a certain caste or ethnicity. Once again, they struggle not because of their belongingness to the commonwealth but their affiliations. How does democracy work in opposition to "people"?

Another issue in terms of practice is the obvious issue of whether or not representative democracy is justified. (Rousseau believes it is not). For Rousseau, there cannot be a representative form of democracy. He (1792) goes as far as to advocate for the changing of the seat of government (signifying the center of government, in today's terms, the Capital City) to different regions and provinces within the state to have a fair share of managing the state affairs as far as the General Will is concerned. Rousseau might have been convinced of his ideas when he wrote in his days if only he had lived to see the humongous growth in population and the tremendous complexity with which governance comes; he would have perhaps had second thoughts.

Here is a list of population milestones around the world, according to the United Nations, Department of Economic and Social Affairs, Population Division (2019)

- 1 billion: after an estimated 200,000 years of human history, achieved in the early 1800s.
- 2 billion: attained in 1927, approximately 123 years after 1 billion.
- 3 billion: obtained in 1960, about 33 years after 2 billion; and
- 4 billion: reached in 1974, only 14 years after 3 billion.
- 5 billion: attained in 1987, about 13 years after 4 billion.
- 6 billion: obtained in 1999, approximately 12 years after 5 billion.
- 7 billion: reached in 2011, approximately 12 years after 6 billion.

Moreover, the seat of government is going to be rotated. What will happen to the embassies of foreign countries since they are supposed to be where the current seat of the government (hosting or receiving country) is? If they (embassies) are to rotate as well, would that not cause financial, technical, logistical, or managerial stress? Is it possible at all? It looks like the world (some states definitely) is making lemonades (representative democracy) out of lemons (the size of states, other complexities, etc.) that the contemporary world presents.

4. Democracy and its intricacies

Having left home together, an army of ants encountered a huge creature, to which they all climbed to have a cruise of their life... One after the other, they narrated their experience of the creature after getting to their abode. *"It is very smooth on its surface,"* one bewilderingly mentioned. *"No, it is rough on the surface,"* another objected. *"It is round," "You are mistaken; it is rather flat,"* another back and forth between colleagues ensued… The huge creature was an elephant. The army of ants had experienced the same elephant. Still, on different sides, and due to that, each thought its description of the elephant was the most accurate and acceptable, without realizing that differences in positions and angles on the elephant gave different opinions and descriptions about it.

In the same vein, although democratic governance has a significant semblance from one country to another, it also has significant variance. Moreover, with different sociological makeup comes differences in the manifestation of democracy. Even within the West, democracy does not have a unified singular meaning and procedures. For

example, as it has become a custom of democracy, secularism, where the state is devoid of religious affiliations, plays an important role. In France, this is called *Laicite*. Is there a difference between laicite and secularism? A ridiculous question, one might hurriedly conclude! However, the answer is surprising in the affirmative. In France, the state strictly prohibits religious symbols or other ostentatious religious practices (Siddique, 2022). This is because of France's historical bitter rivalry between the Church and the State. However, in other Western states like the US, although secularism is alive, it does not manifest in the strict or absolute sense as it does in France. The dollar bill is inscribed "In God, We Trust," an abomination in France. In France, no person puts on religious symbols in the workplace, but in the US and the UK, people do. The Senate begins with prayer (sometimes by Muslim clergy or a Christian in the US); this will be a political sin in France. The Premier League allows Muslim players to break their fast during football games, whereas Ligue 1, France's top league, does not (Ryan, 2023).

If democratic principles are not explicitly outlined in scriptures and there's no single authority dictating its definition, who ultimately defines democracy and for whom? Is it the historically colonizing Western nations? Or the authoritarian-dominated regions of Asia? Perhaps the dictatorial-leaning global South? Or even the US, with its past marked by Jim Crow laws? It's difficult to pinpoint definitively. From a historical point of view, it is assumed that those countries that strengthened their democratic governance did so by tailoring their sociological dimension with the best practices of democracy (Abubakar Siddique, 2023). It took time as well.

5. Democracy in opposition to people

In mentioning the deep variances in a democracy, one country that could easily come to mind is Lebanon. That country has different ethnicities, but it is not the issue of ethnicity that significantly matters in the democratic dispensation; it is religion. In a consociational democracy, political positions are filled on the lines of ethnicities, tribes, etc., i.e., hardcore representation of one's affiliations. When this representation is based on religious affiliation, it is called confessionalism, the kind of practice in Lebanon. Note that Lebanon is a democratic country; it would not accept any description less than that! In Lebanon, the political structure mandates that the President hails from the Maronite Christian community, the Prime Minister is selected from the Sunni Muslim population, and the Speaker of Parliament is drawn from the Shia Muslim community. While this setup guarantees power distribution among the three major religious sects, it has unfortunately exacerbated sectarian divisions within the nation (Siddique, 2022).

Sometimes, in the US, some laws forbade blacks and other people of color from using the facilities that whites used in the country, such as the Jim Crow laws. These were local and state laws that marginalized blacks from the end of the Civil War to 1968. It denied blacks the right to vote, hold certain jobs, get an education from certain schools, and other segregations. The US then would not have accepted any label except democratic governance as its form of governance, although these horrifying laws were manifested. Blacks face death, violence, jail terms, etc., for not obeying these laws.

Before these unimaginable laws, Alexis de Tocqueville, a French political scientist, theorist, and historian, after spending nine months in America between 1831 and 1832 and observing the democracy of America since it was much in its nascent stage, published the voluminous work 'Democracy in America', the part that strikingly concerns this present issue of the paper is the coining of the term *Tyranny of the majority*. Here he is in free flow; "*the will of the nation is the only thing that can claim to be sovereign; but the majority that expresses this will is exposed to the same passions, the same vices, and the same weaknesses as the individuals who compose it*" (2000, p.317). He mentions again,

> But no power upon earth is so worthy of honor for itself, or of reverential obedience to the rights which it represents, that it may be safely trusted without being watched and guarded. The more hands have contributed to the oppression of an individual, the more difficult it is to free oneself from their oppression. The tyranny of the majority is still tyranny, the most odious of all tyrannies, because it is not based on the interest or caprice of a prince, but on the impulses and the desires of an entire people." (2000, Volume 1, Part 2, Chapter 7, page 318)

To link the two points, the issue of Lebanon's governing systems and the US's and the tyranny of the majority with the issue of democracy opposing "people," it is obvious that anytime the majority sects get their way through passing laws (draconian as it may be for some people), it depicts the issue of democracy working in opposition to "people." When the Jim Crow laws were enforced, they were legal; in other words, it was illegal to not conform to the laws, irrespective of their repulsiveness. These were laws that the majority had their way with, which significantly disenfranchised a significant number of people, stole the liberty and rights of these same people, and unjustly caused the deaths of several. A typical working of democracy in the opposition of the "people."

6. Methods & means of refining democracy

To mention the mechanisms of refining involved in a democratic dispensation is to presuppose democracy is the ideal governing system there is. Is that the case? Could other systems of government supersede democracy in its benefits to the people? Would a dictatorship, authoritarian, top-down government system be a better alternative to democracy? This question would have been difficult to answer had the world stuck in the days before the Cold War, but in the fullness of time, democracy has achieved greater feats than all other governing systems. Indeed, even before the fullness of time, there was the utterance of the "End of History", referring to the collapse of the USSR and liberal democracy coming out victorious against its rival, authoritarian, dictatorial top-down governing system.

The hypothesis that an authoritarian governance framework can facilitate economic expansion is a notable concept in political economy. This perspective posits that a reduction in political and social liberties can be a catalyst for steering the economy toward positive development. This notion is encapsulated in what is known as the Lee Thesis, a theory attributed to and named after Lee Kuan Yew, the inaugural Prime Minister of Singapore. However, according to Amartya Sen (the Nobel Laureate in economics), the thesis has little evidence to support the claim. He mentions that the Lee Thesis is "based on very selective and limited information, rather than on any general statistical testing over the wide-ranging data available" (Sen, 1999). On the other hand, democracy can confer enormous political, social, and economic benefits to the people. In fact, according to the research of Amartya Sen into famines around the globe, he concluded: "…it is not surprising that no famine has ever taken place in the history of the world in a functioning democracy-be it economically rich (as in contemporary Western Europe or North America) or relatively poor (as in post-independence India, or Botswana, or Zimbabwe)" (Sen, 1999).

It is quite obvious why this is the case; no famine ever happens in a functioning democracy since political leaders in democracies have elections to win, whereas, in authoritarian forms, none exists. Henceforth, there is a lack of incentive to avert famines in authoritarian regimes. Moreover, in democracy, mentions Sen, the informational role in democracies helps to avert famines, which surprisingly Mao Zedong (1976, pp.149-50) recognizes when he said after the famine of 1962 had taken the lives of millions:

Without democracy, you have no understanding of what is happening down below; the situation will be unclear; you will be unable to collect sufficient opinions from all sides; there can be no communication between top and bottom; top-level organs of leadership will depend on one-sided and incorrect material to decide issues; thus you will find it difficult to avoid being subjectivist; it will be impossible to achieve unity of understanding and unity of action, and impossible to achieve true centralism.

Agreeing that democracy will be our best bet for development, let's consider now the curative mechanisms and means of refining and strengthening democracies. The first that comes to mind is deliberative democracy. This labeling is a bit confusing, considering that even in representative democracies, deliberations could be fused. At the hearing of democracy attached to deliberative, one wonders whether it is in rivalry with representative democracy. Both can coexist. Due to this seemingly confusing labeling, deliberative mechanism, procedure, or model will be a suitable term. This method, model, or mechanism ensures that there is consultation with the citizens and consensus is reached in decision-making. Discoursing, deliberating, debating, and dialoguing is at the center of the democratic process as far as this mechanism is concerned (Landemore, 2017). This mechanism traces its roots to Aristotle and Hubermas (Ercan, 2014). Some contemporary writers on this issue have been James Fishkin, Joshua Cohen, etc.

An additional conceptual framework within the realm of political theory is that of agonism, or more specifically, democratic agonism. Agonism, derived from the Greek term *'agon,'* meaning "struggle," is a theoretical perspective in politics and social studies that highlights the constructive aspects of certain forms of conflict. This theory recognizes the enduring presence of conflicts within the political domain, yet it seeks to illustrate how these conflicts can be navigated constructively. Proponents of agonistic theory place significant emphasis on the role that conflict plays within democratic systems. The variant of democratic theory incorporating this agonistic viewpoint is termed agonistic pluralism, which essentially explores the dynamics of diversity and contention in a democratic setup.

Agonistic models of democracy have three elements; according to Wenman, one is constitutive pluralism. The absence of a universal measure of adjudicating between conflicting political values. Second, the tragic view of the world. According to agonists, the world has no place for "hope of final redemption from suffering and strife"; therefore, political conflicts will continue to exist (Wenman, 2013). Third, there is a belief in the value of conflict.

"In a democratic polity, conflicts and confrontations, far from being a sign of imperfections, indicate that democracy is alive and inhabited by pluralism" (Mouffe, 2000). Among the leading writers on agonism are Chatel Mouffe, Samuel Chambers, Bonnie Honig, and William E. Connolly.

With both deliberative and agonistic models of democracy, the quality of our democratic dispensation is enhanced, although there are numerous critiques of both. Among the critiques of deliberative mechanisms is that they are costly and time-consuming. Those good in rhetoric and oratory will have their way against those fairly weak. There is also the issue of how to reach a consensus since consensus is far more desirable than majoritarian voting. Two main critiques of agonism are the lack of clarity on how and the avenue for transforming antagonism into an agonism, as it is the main agenda of agonism. Second, because agonism is seen as a competitive theory with the deliberative model, it is difficult to comprehend the differences between the two since it relies on the same or similar methods, like the idea of rationalization, etc.

7. Refining models and the idea of democracy in opposition to people

Deliberative and agonism must be considered complementary, mutually dependent, and not competitive, and "a properly understood agonism requires the use of deliberative skills but also that even a strongly deliberative politics could not be completely exempt from some of the consequences of agonism" (Ballaci, 2019). In viewing conflict as a necessary evil for refining our democracies, as agonism posits, we can only deliberate on these contentious issues among ourselves and refrain from resorting to violence. Because the debate, deliberation, etc., comes with sincerity (in the case of a deliberative model) in discoursing, open to changing minds and our minds being changed, and listening to the other side of the argument, there is room for everyone to exist and flourish peacefully. The majority in the state become those with better arguments and solutions and not just the majoritarians based on loyalty to an affiliation or identity.

With both models, our affinity towards identifying as group members based on color, race, etc., will wane gradually. Because there will be room for voicing out our opinions on issues, consensus will be built on arguments, ideas, and solutions that are the best. Policies are thus backed by deliberated sound argumentations and ideas by all and not just voted for by the majority who gets away with anything. The majority of these models are the group with sound ideas. This group is not created based on affiliations but by diverse individuals with bright ideas and solutions. (Of course, this only works when the power of reason trumps our affinity for being part of our affiliation).

Instead of merely voting on issues as they happen during local decision-making, deliberation could enhance the quality of decision-making. Town hall meetings could be replaced with deliberation meetings at the local level. Should public schools be allowed to teach pupils about new research in gender studies? This could be an issue of deliberation that the local community could engage in to reach a consensus. The most beneficial feature of the deliberative and agonistic mechanism is that it allows discussion instead of violence and authoritarianism. It furthers the cause of bonding among citizens of a state (commonwealth). This is, at once, the single most important strategy to break the vice of the tyranny of the majority that opposes a section of people. In other words, for democracy to work for the people instead of against them, this mechanism could be a vital starting point.

8. Conclusion

As was clear throughout the paper, when democracy is left alone, it malfunctions. Efforts must be made constantly and consistently to refine and correct the flaws that the democratic dispensation might show. Democracy can always work against the interest of the general will of the people, especially seen in countries where ethnic differences and their disturbing consequences abound and are weaponized in political dispensation. Ultimately, the issue of democracy working against "people" is a major concern noted in numerous countries and historical periods. While Lebanon has a consociational democracy based on religious connections, which has exacerbated sectarianism in the country, the United States has a legacy of Jim Crow laws that have disenfranchised and mistreated black people for some time. The notion of the tyranny of the majority, developed by Alexis Tocqueville, stresses the hazards of the majority's inclinations and aspirations leading to oppression and injustice, which is still applicable in today's democratic society. The examples in this essay show how democracy can be utilized by the majority to oppress the minority, raising crucial questions regarding the true meaning and practice of democracy. Refining democracy involves integrating deliberative and agonistic models. Deliberative democracy, focusing on consensus and inclusive dialogue, addresses the need for deeper citizen engagement in decision-making. Agonistic democracy, recognizing the constructive role of conflict and pluralism, adds a dynamic dimension to democratic discourse. Despite facing critiques such as efficiency concerns and the complexity of managing constructive conflict,

both approaches are crucial for the ongoing evolution and strengthening of democratic systems. Moreover, they underscore the complexity of governance and the necessity of continuous dialogue and adaptation to pursue a more inclusive, responsive, and effective democracy. The journey towards perfecting democracy is ongoing, and it requires a blend of theoretical understanding and practical application, always to address the evolving needs and challenges of societies.

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The effectiveness of the SESFAR intervention program in supporting the phonological awareness of children with autism spectrum disorder

Işıl Terzioğlu, Elif Sazak Duman

The effectiveness of the SESFAR intervention program in supporting the phonological awareness of children with autism spectrum disorder

Işıl Terzioğlu[1] and Elif Sazak Duman[2]

[1]Dr., Special Özden Education School, Bolu, Türkiye, ORCID: https://orcid.org/0000-0002-8573-6441
[2]Corresponding Author, Prof. Dr., Faculty of Education Department of Special Education, Bolu Abant Izzet Baysal University, Bolu, Türkiye,
E-mail: sazak_e@ef.ibu.edu.tr, ORCID: https://orcid.org/0000-0003-3530-9588

Article Info	Abstract
Research Article Received: 2 March 2024 Revised: 25 March 2024 Accepted: 26 March 2024 **Keywords:** Autism spectrum disorder, Early literacy, Phonological awareness, Phonological awareness intervention program.	The purpose of this research was to determine the effectiveness of the Phonological Awareness Intervention Program in supporting the phonological awareness skills of two six- and seven-year-old children with autism spectrum disorder. Additionally, we collected follow-up and generalization data. The social validity data were evaluated by social comparison and subjective evaluation methods. The findings from the study showed that children with autism acquired phonological awareness skills with the Phonological Awareness Intervention Program presented with the direct instruction method. They maintained these skills in the follow-up sessions held after 1, 3, and 5 weeks and could generalize them to different people, tools, and settings. On the other hand, the social validity findings showed that children with autism who were the study participants exhibited similar phonological awareness skills to their peers. The findings obtained from the parents and teachers of the participating children indicated the study's social validity.

1. Introduction

Autism spectrum disorder (ASD) is a developmental disorder that manifests itself with various deficits in the domains of social interaction and social communication, accompanied by restrictive and repetitive behaviors, and emerges early in life (American Psychiatric Association [APA], 2013). The diagnostic criteria for ASD include inadequacy or limitation in two main domains. The first is the presence of a clinically significant, persistent deficit in social communication and interaction, while the second is limited, repetitive behaviors, interests, and activities (APA, 2013). Although not included in the diagnostic criteria for ASD, it is essential to evaluate the cognitive skills of the disability group to develop appropriate intervention programs (Sucuoglu, 2014). Children with ASD have deficits in cognitive skills and inadequacies in social interaction and communication. When assessed in reading skills, children with ASD perform lower than their typically developing peers (Whalon, Al Otaiba, & Delano, 2009). A standard reading profile for children with ASD involves limitations in typically developing decoding ability, deficiencies, and inconsistencies in comprehension skills (Nation, Cocksey, Taylor & Bishop, 2010; Wei, Christiano, Jennifer, Wagner, & Spiker, 2015). Although many children with ASD fit this profile, children with ASD may not be literate. Children with ASD constitute a heterogeneous group with deficits in different areas: (a) decoding words (Nation et al., 2006; Wei et al., 2015), (b) reading fluency (Kamps, Barbetta, Leonard, & Delquadri, 1994), and (c) text comprehension (Nation et al., 2010; Ricketts et al., 2013). Hence, even children with ASD who fit the typical reading profile display high variability; some children underperform or overperform at the same level in decoding and comprehension skills (Nation et al., 2006; Wei et al., 2015).

Determining the relationship between early and later reading skills in children with ADS is essential. Dynia, Bean, Justice, and Kaderavek (2019) found that the existing literature on the early literacy skills of children with ASD includes only five published research studies (Davidson & Ellis Weismer, 2014; Dynia et al., 2017; Dynia

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et al., 2014; Lanter et al., 2013; Lanter et al., 2012), one unpublished doctoral dissertation (Rosenberg, 2008), and one literature review by Westerveld, Trembath, Shellshear, and Paynter (2016). The said studies have drawn several conclusions. First, when children with ASD are compared to their typically developing peers, it is seen that they equally tend to have a reasonably good knowledge of the alphabet, but children with ASD perform behind their peers in writing concept knowledge, vocabulary knowledge, and phonological awareness (Dynia et al., 2014; Lanter et al., 2012). Second, although there seems to be a typical profile of early literacy for children with ASD, there are subgroups of children with varying low performance in early literacy skills or high-performance patterns (Davidson & Ellis Weismer, 2014; Lanter et al., 2013). Third, children with ASD know the alphabet and write well and have similar growth rates in conceptual knowledge as their peers (Dynia et al., 2019). Finally, the performance of children with ASD in early literacy measures their performance in social skills (Davidson & Ellis Weismer, 2014; Lanter et al., 2012), language (Dynia et al., 2014; Lanter et al., 2013), and cognition (Davidson & Ellis Weismer, 2014), which are related to ASD-related deficits. Considering these studies, it is possible to conclude that early literacy skills develop in children with ASD. Moreover, early phonological awareness skills are among the literacy skills in children with ASD. Hence, the limitations of the studies draw attention.

Thus, there are only three studies in which phonological awareness skills were taught to children with ASD (Heimann et al., 1995; Mohammed & Mostafa, 2012; Tjus et al., 1998). In the first study in which phonological awareness skills were taught to children with ASD, Heimann et al. (1995) examined the effectiveness of Alfa, a microcomputer program, in supporting the phonological awareness skills of 11 preschool children with ASD, nine children with various disabilities, and ten typically developing children. The study found that all participating children improved their phonological awareness skills and word reading skills using the program Alpha. The following study replicated the first study by Tjus et al. (1998). In the last study, Mohammed and Mostafa (2012) conducted research with a pretest-posttest control group experimental design, including 24 children with ASD in the experimental group and 23 children with ASD in the control group. The children in the experimental group were only taught word recognition skills. The study found an increase in the word recognition skills of children with ASD in the experimental group. As is seen, there are few studies (Heimann et al., 1995; Mohammed & Mostafa, 2012; Tjus et al., 1998) aimed at supporting the phonological awareness skills of children with ASD, and these studies are not aimed at supporting the majority or all of the phonological awareness sub-skills. Therefore, future studies should develop interventions that support phonological awareness skills for children with ASD or investigate the effectiveness of intervention programs for phonological awareness skills. The present study contributes to the literature and early literacy practices for children with ASD. This study will use the Phonological Awareness Intervention Program, also known as the SESFAR Intervention Program, for children with ASD and no reading skills. The SESFAR Intervention Program is a modular early literacy program developed by Akdal and Kargin (2019) for preschool children with inadequate phonological awareness skills. The SESFAR Intervention Program was implemented by Akdal and Kargin (2019) on 5-year-old children with poor phonological awareness skills according to the stages of the direct instruction method, and the program was proven effective. This study aimed to examine the effectiveness of the SESFAR (Phonological Awareness) Intervention Program in supporting the phonological awareness skills of children with ASD. Therefore, answers to the following research questions were sought.

1. Did the SESFAR Intervention Program support the skills of children with ASD who participated in the study in separating sentences into words, words into syllables, rhyme awareness, and combining syllables?

2. Could children with ASD maintain the skills they had learned 1, 3, and 5 weeks after the end of the intervention, and could they generalize them to their primary school teachers (a different person) and their classroom (a different setting)?

3. Can children with ASD display phonological awareness skills similar to their typically developing peers of the same age (social validity)?

4. What are the teachers' opinions of the children participating in the study about the SESFAR Intervention Program (social validity)?

2. Methodology

The implementation of the research was carried out with the approval of the Governorship Provincial Directorate of National Education, dated 12/11/2019 and numbered E-2020/01.

2.1. Participants

The participants of this study consisted of three children with ASD, twelve typically developing children, implementers, and observers.

2.1.1. Children with ASD

Three children diagnosed with ASD, one girl, and two boys, participated in this study. One child was aged six, and two were aged seven. One of the participating children was attending a preschool, and two were attending special education classes and receiving support education at a private special education and rehabilitation center. One of the children participated in the pilot study (a substitute participant), and the others participated in the experimental process. Some prerequisite characteristics were sought when selecting participants. These prerequisite characteristics can be listed as follows: (a) not being diagnosed with a developmental disability other than ASD, (b) being able to use verbal language, (c) not having acquired literacy skills (being in the early literacy period), (d) scoring below the cut-off score in the phonological awareness skills subtest of the Early Literacy Test (EROT, Kargin et al., 2015), (e) counting numbers from 1 to 10, and (f) following two- and three-word instructions. The first child with ASD took part in the pilot study. This child diagnosed with ASD was given the code name Baran. Baran is a six-year-old boy who attends a kindergarten and receives education at a private special education and rehabilitation center. The second and third participants participated in the experimental process and were given the code names Ayse and Aras. Ayse is an 86-month-old girl who attends a special education class and receives education at a special education and rehabilitation center. Ayse has no teaching background in literacy and did not attend face-to-face and online classes during the experimental period of the study due to the COVID-19 pandemic. In other words, Ayse has not received any education on literacy. Aras is an 81-month-old boy who has not started primary school yet, has just completed kindergarten, and has no history of literacy-related instruction.

The administrations of the schools that the children attended were informed about the study and provided the contact information of the participants' families. The parents of the children were informed about the study, and their verbal and written consent for participation was obtained. The practices were carried out with the children during the COVID-19 pandemic, and the health-protective behaviors required by the pandemic (cleaning, wearing a mask, and social distancing) were considered.

The Turkish version of the Gilliam Autism Rating Scale-2 (TV-GARS-2) (Diken et al., 2012) was applied to determine the degree to which the participants were affected by autism. The autistic disorder index was 90 points for Baran, 103 for Ayse, and 88 for Aras. According to the TV-GARS-2, if the autistic disorder index is 85 or higher, the probability of ASD is relatively high (Diken et al., 2012). Accordingly, the probability of ASD was considered high in all three children.

The EROT was used to assess the early literacy skills of children with ASD. According to the phonological awareness subtest of the EROT, Baran's and Ayse's scores were .25, and Aras's score was .18. According to the EROT, children with a cut-off score below .50 are considered to need support in the relevant area (Kargin et al., 2015). Accordingly, it was found that all three children needed support in phonological awareness skills.

2.1.2. Typically developing children

To obtain social validity data, one of the sub-objectives of the present study was aimed to determine whether the children with ASD who participated in the study exhibited phonological awareness skills at a similar level after the intervention to their typically developing peers who were attending preschool education classes. Therefore, twelve typically developing children attending preschool education classes participated in the current study. The children's ages ranged from 76 months (6 years 4 months) to 83 months (6 years 11 months). Verbal permission to participate in the study was obtained from their mothers.

2.1.3. Research staff

The first researcher carried out the study's implementation process. The researcher was a 34-year-old female working on her doctoral degree in special education during the study period. She conducted all sessions. The first researcher has certificates of participation for the TV-GARS-2, EROT, and SESFAR Intervention Program. The second researcher has the title of professor in special education and has been working in this field for twenty-three years. The second researcher consulted the first researcher in designing and conducting the study.

2.2. Settings

The pilot study, experimental process, and external validity were conducted in the three children's rooms in their homes. There was a table and two chairs in their rooms, a video camera, and activity materials for the SESFAR Intervention Program, including picture cards on the table, data collection forms, and predetermined reinforcers for the children. It was ensured that all children sat facing each other.

2.3. Materials

2.3.1. Picture cards

The study process consisted of baseline, probe, intervention, follow-up, and generalization sessions, and picture cards were used to carry out activities in all sessions. Since the SESFAR Intervention Program is taught to the participants through direct instruction, the same picture cards were used for modeling and guided practices. In contrast, different picture cards were used for independent practice. Picture cards were used with the BIFF 1, 2, 3, and 4 during the data collection phase, baseline, follow-up, and probe sessions. Therefore, the researchers prepared picture cards for these sessions. The picture cards in the BIFF used in the baseline phase consisted of sentences, words, rhymes, and syllables not used in the SESFAR Intervention Program activities.

The picture cards in the BIFF-1 were prepared for the skill of separating sentences into words, including sentences such as "Ela ran.", "Go to school early.", "Ants work hard.", and "Giraffes are very tall." The sentences were visualized on the front of the card, and the related sentences were written on the back. When selecting sentences, the researchers tried to ensure that sentences consisting of 2, 3, 4, 5, 6, and 7 words were equally distributed.

The picture cards in the BIFF-2 were prepared for the skill of separating words into syllables. For example, the words cat, airplane, elephant, and automobile (the English equivalents of the words are presented here) were used and visualized on the front side of the card. The related words were written on the back. When selecting words, the researchers tried to ensure that they were not used in the intervention sessions and that words consisting of 1, 2, 3, and 4 syllables were equally distributed.

In the picture cards in the BIFF-3 prepared for the rhyme awareness skill, words such as "stair-chair" (the English equivalents of the words are presented here) were visualized on the front of the card, and the related words were written on the back. When selecting words, the researchers noted that they were not used in the intervention sessions.

In the picture cards in the BIFF-4 prepared for the skill of combining syllables, the words, e.g., "tea-cup," "cup-cake," and "rain-coat" (the English equivalents of the words are presented here), were visualized on the front of the card, and the related syllables were written on the back. When selecting syllables, the researchers noted that they were not used in the intervention sessions and were meaningful syllables.

2.3.2. Video camera

This study used a Sony video camera to record the baseline, intervention, follow-up, and generalization sessions during the pilot study and experimental process. The camera was placed in a setting that would not distract the children's attention.

2.3.3. Reinforcers

The reinforcers preferred by the participants were determined before the skill using the "offering a pre-task choice" technique.

2.4. Dependent variables

The study's dependent variables were the participants' levels of learning phonological awareness skills (separating sentences into words, separating words into syllables, rhyme awareness, and combining syllables). The levels at which Ayse and Aras performed the skills of separating sentences into words, separating words into syllables, rhyme awareness, and combining syllables were obtained by multiplying the ratio of their correct responses to the Baseline, Intervention, and Follow-up Form (BIFF) 1, 2, 3, 4 to the total responses in each test by 100. The participants were expected to perform each skill at an accuracy level of 80% and above.

2.4.1. Independent variable

The study's independent variable was the Phonological Awareness Skills Support Intervention Program (SESFAR), which was presented with a direct instruction method. The content of the SESFAR includes a total of 72 activities. Activities include eight skill areas supporting the skills of separating words into syllables, combining syllables, separating sentences into words, rhyme awareness, matching according to the first sound, matching according to the last sound, dropping the first sound of words, and dropping the last sound. The first activity for

each skill aims to help children understand the targeted skill. The researchers reviewed the literature and prepared all of the activities used in the intervention program. For their use in the implementation phase, different playgrounds for the activities and 595 pictures were prepared, and graphic designers drew them.

2.5. Data collection tools

2.5.1. TV-GARS-2

The Gilliam Autism Rating Scale-2 (GARS-2, 2005), the revised version of the Gilliam Autism Rating Scale (1995), was recommended to be used as a type-two (level two) assessment instrument by Johnson, Myer, and the Council on Children with Disabilities guidelines (2007). The TV-GARS-2 was developed based on the current definitions of the DSM-IV-TR (2000) and the Autism Society of America (2003) and standardized by Diken et al. (2012) on 1191 individuals with autistic disorder aged between 3 and 23 years. The TV-GARS-2 consists of three subscales with specific, observable, and measurable behaviors related to stereotypic behaviors, communication, and social interaction. The TV-GARS-2 includes a total of 42 items, with 14 items in each subscale. While the internal consistency (Cronbach's alpha) coefficient of the total scale was .88, the internal consistency coefficient of the stereotype behaviors subscale was .79, the internal consistency coefficient of the communication subscale was .77, and the internal consistency coefficient of the social interaction subscale was .85. In the test-retest reliability study, the test-retest reliability coefficients for the subscales and Autistic Disorder Index (ADI) were above .90 (Diken et al., 2012).

2.5.2. EROT data recording form

Developed by Kargin et al. (2015), the EROT is a valid and reliable tool that aims to measure the early literacy skills of preschool children in seven dimensions. Validity and reliability studies were conducted on 403 children aged 60-72 months attending kindergartens. Internal consistency (KR-20), two-half test reliability (Spearman-Brown), and test-retest reliability coefficients were calculated in the reliability analysis. Regarding the content validity of the EROT, the expert panel formed for the content validity of the EROT stated that the items in each subtest of the EROT reflected children's competencies in the relevant tests. In this respect, it was accepted that the EROT adequately reflected the areas to be measured. The findings from the exploratory and confirmatory factor analyses regarding the construct validity of the EROT showed that the EROT consists of seven subtests. The factor loadings of the items in each subtest ranged from .43 to .93, and the subtests gave the expected fit within themselves. According to these results, it was accepted that the construct validity of the EROT was sufficient.

The EROT consists of the following subtests: (a) vocabulary knowledge in receptive language, (b) expressive vocabulary, (c) general naming, (d) functional knowledge, (e) letter knowledge, (f) phonological awareness, and (g) listening comprehension. All subtests except listening comprehension were used in this study.

2.5.3. BIFF 1, 2, 3, 4

The study used the BIFF 1, 2, 3, and 4 to record the baseline, intervention, and follow-up sessions during the pilot and experimental process to collect reliability data for the dependent variable and social comparison data from social validity data. The BIFF-1 was used for the skill of separating sentences into words, the BIFF-2 for the skill of separating words into syllables, the BIFF-3 for the rhyme awareness skill, and the BIFF-4 for the skill of combining syllables. No reaction was given to the participant's responses to the BIFFs, and correct and incorrect responses were recorded on the data collection form. An average percentage of correct responses was calculated at the end of each session by dividing the total number of steps responded correctly by the total number of steps in the BIFF 1, 2, 3, and 4 for each trial.

2.5.4. SESFAR Intervention Program Procedural Fidelity Forms (SESFAR-PFFs)

The SESFAR Intervention Program procedural fidelity forms (SESFAR-PFFs) 1-2 were developed to collect procedural fidelity data. The SESFAR-PFF-1 items consisted of the teaching steps of the direct instruction method and the SESFAR Intervention Program. In these steps, the first researcher (1) prepares the tools and activity materials, (2) attracts the participant's attention, (3) tells the participant the purpose and importance of the session, (4) presents the reinforcer, (5) presents the skill instruction, (6) performs the teaching by applying the SESFAR Intervention Program activities according to the stages of the direct instruction method, (7) gives feedback to the participant, (8) presents the reinforcer, and (9) ends the session. The SESFAR-PFF-2 included the behaviors that the first researcher should exhibit in the baseline, probe, follow-up, and generalization sessions. These are (1)

preparing tools and activity materials, (2) attracting the participant's attention, (3) providing skill instructions, (4) remaining unresponsive to the participant's responses, and (5) reinforcing the participant's cooperation.

2.5.5. SESFAR intervention program implementation opinion form for teachers and mothers (SESFAR Intervention Program-IOF-T-M)

The SESFAR Intervention Program-IOF-T-M was developed to collect subjective evaluation and social validity data from teachers and mothers. The form included open-ended questions about the effectiveness of the SESFAR Intervention Program for children, its usefulness, and whether they would use the program.

2.6. Experimental design

A sub-model of the multiple probe design with probe trials across subjects, one of the single-subject research designs, was employed in the present study.

2.7. General procedure

The general procedure of the study consisted of the preparation phase, pilot study, and experimental process.

2.7.1. Preparation phase

Before initiating the experimental process of the study, the researchers applied the EROT and the TV-GARS-2 to three participants with ASD. Thus, the participants' early literacy skill levels, the accuracy of their autism diagnoses, and the degree of being affected by autism were determined.

2.7.2. Pilot study

Before initiating the experimental process, a pilot study was conducted to determine the number of activities that should be included in an intervention session and the duration of the intervention session to prevent possible problems that might arise during the intervention sessions and decide on the phonological awareness skills to be acquired.

In the pilot study, the phonological awareness skills in the SESFAR Intervention Program, which consist of separating sentences into words, separating words into syllables, rhyme awareness, combining syllables, matching words according to their final sounds, matching words according to their first sounds, dropping the final sound of words, and dropping the first sound of words, were practiced with Baran. However, Baran had difficulty learning all the skills in the SESFAR Intervention Program sequentially; he especially had difficulty acquiring the skills of matching words according to their final sounds, matching words according to their first sounds, dropping the final sound of words, and dropping the first sound of words. However, during the pilot study, it was determined that one instructional session lasted approximately 30 to 40 minutes, and a maximum of three activities could be practiced in one instructional session. Additionally, when the pilot study was completed, it was seen that it took approximately 120 minutes to teach each skill in the SESFAR Intervention Program. According to the information from the pilot study, it was decided to work with the participants with ASD (Ayse and Aras) in the experimental process on the skills of separating sentences into words, separating words into syllables, rhyme awareness, and combining syllables and to conduct three activities in each intervention session.

2.7.3. Experimental process

The experimental process of the study consisted of baseline, intervention, follow-up, and generalization sessions.

Baseline sessions. Ayse and Aras participated in the experimental process, which was first conducted with Ayse and then with Aras after Ayse's experimental process ended. The first researcher conducted the baseline sessions in the participants' homes, in their rooms, three days a week, one session a day, with each session consisting of 10 trials, due to the restrictions caused by the COVID-19 pandemic. In the baseline sessions, data were collected sequentially for four different skills: separating sentences into words, separating words into syllables, rhyme awareness, and combining syllables. For both participants, the baseline phase was continued for at least three consecutive sessions until stable data were obtained (the difference between data points was no more than ±15%). Data during the baseline phase were collected with the BIFF 1, 2, 3, and 4.

Intervention sessions. After stable data were obtained in the baseline phase for five consecutive sessions, the first researcher started to teach the SESFAR Intervention Program. She first started to conduct the intervention

sessions with Ayse. After the SESFAR intervention program affected Ayse's phonological awareness skills, the first researcher started to conduct the intervention sessions with Aras. In other words, she performed systematic replication for Aras. Systematic replication tests whether the experimental effect from a study will be obtained under different conditions, such as a different setting, time, behavior, or participants (Tekin-İftar, 2018).

The intervention process included teaching the sub-skills of separating sentences into words, separating words into syllables, rhyme awareness, and combining syllables, and three activities for each skill. The program was taught by the direct instruction method. Therefore, the intervention sessions consisted of pre-activity preparations, modeling, guided practices, and independent practices. At the first stage, the first researcher informed the participant about the activity to be carried out, the rules to be followed by the participant, and that if the participant followed these rules, the participant would receive a reward of their choice at the end of the activity. Then, the materials to be used in the activity planned for the relevant intervention session were placed on the table, and the participant was allowed to examine them. The modeling stage was started after this stage was completed, and the first researcher explained and demonstrated each skill. The first researcher primarily demonstrated the activities by modeling. Then, the guided practice phase was started, and the participants performed the activities together with the first researcher, respectively. Finally, the participants were asked to complete these three activities independently in the independent practice phase. The intervention sessions continued until the activities in the SESFAR Intervention Program were completed, the targeted criterion (80% and above accuracy) was reached, and stable data (the difference between data points was no more than ±15%) were obtained in three consecutive sessions for the skills of separating sentences into words, separating words into syllables, rhyme awareness, and combining syllables, respectively. Then, the intervention phase was terminated, and the follow-up and generalization phases were initiated. The BIFFs 1, 2, 3, and 4 were again used to collect data during the intervention and follow-up phases.

The COVID-19 pandemic affected Ayse's intervention phase process. For example, to start the third session for the first skill, intervention sessions had to be interrupted for ten days within the scope of the circular. The remaining sessions were completed three days a week, with one intervention session per day, considering the restriction measures. In this process, studies were completed by considering the health protective behaviors (cleaning, wearing a mask, and social distancing) required by the COVID-19 pandemic.

Probe sessions. Probe sessions were organized at the end of each intervention session consisting of three activities, using the BIFF 1, 2, 3, and 4 prepared for each skill. In the probe sessions, there was a waiting period of one to two minutes between probe trials. The first researcher told the child, "I am going to show you some picture cards now. Let us take a look together, shall we?" and asked ten questions related to the studied skill in the BIFF-1, 2, 3, and 4, respectively. The first researcher did not react to the participant's answers and put a "+" sign in the BIFFs for correct answers and a "-" sign when the participant did not respond or gave an incorrect answer.

Follow-up sessions. The first researcher conducted the follow-up sessions 1, 3, and 5 weeks after the end of the intervention sessions in the same way as the probe sessions.

Generalization sessions. The researchers evaluated the generalization of the phonological awareness skills acquired by Ayse and Aras by implementing the SESFAR Intervention Program in three different ways before and after the intervention. In the generalization sessions, the participants and their support teachers sat at the study table in their classrooms. After drawing the participant's attention, the teacher started administering the phonological awareness subtest of the EROT to the participant by saying, "Now I am going to ask you some questions, and I expect you to answer them." The implementer and the teacher conducted the generalization sessions without providing any prompts or feedback to the participant. The participant's correct responses were recorded as "+," while non-responses or incorrect responses were recorded as "-" on the EROT data collection form.

2.8. Reliability studies

In the research, two reliability studies with independent observers were conducted: inter-observer reliability and procedural fidelity study. An inter-observer reliability study was conducted by two observers independently evaluating the same intervention sessions (Alberto & Troutman, 2009), and the reliability coefficient was calculated with the formula "[(agreement) / (agreement + disagreement)] x 100" (Tekin-Iftar, 2018). First, the independent observers explained the expected responses of the participants and the correct and incorrect responses, and they were informed about the BIFF 1, 2, 3, and 4 on which they would record the data. Then, the independent observers watched the recordings (30% of the total recordings) randomly selected from among the video

recordings of all sessions and independently recorded the participant's responses to the questions about phonological awareness skills on the BIFF 1, 2, 3, and 4. As a result of the study, the inter-observer reliability coefficients for Ayse and Aras were found to vary between 94% and 100%.

The researchers revealed whether the independent variable was implemented as planned by conducting a procedural fidelity study (Kazdin, 2011; Tekin-Iftar, 2018). To this end, the independent observers watched the recordings (30% of the total recordings) randomly selected from among the video recordings of all sessions of the experimental process and evaluated whether the first researcher exhibited the behaviors that the first researcher should display in each phase of the experimental process using the SESFAR-PFF-1 or SESFAR-PFF-2. Then, the responses were analyzed with the formula "[(observed implementer behavior/planned implementer behavior) x 100)," and the procedural fidelity coefficient was obtained (Tekin-Iftar, 2012). The procedural fidelity coefficient was found to vary between 88% and 100% for Ayse's experimental process and 100% for Aras' experimental process.

2.9. Social validity

The researchers conducted social validity studies using subjective evaluation and social comparison (Kazdin, 2011). For the subjective evaluation, the first researcher reached the teachers and mothers of the participants and asked them the questions on the SESFAR Intervention Program-IOF-T-M. The researcher audio-recorded the interviews and transcribed them descriptively to analyze the data.

Social comparison is the process of comparing the performance of the individual or individuals who are the target of the behavior change process with the performance of the group defined as a reference group consisting of individuals who are thought to exhibit the target behavior or behaviors in the desired form and level before and after the intervention and who do not need the behavior change process (Tekin-İftar, 2018). In this study, the researchers used social comparison to determine whether they selected socially essential skills for the participants and whether the obtained effects led to a functional change in the participants. Therefore, the first researcher reached typically developing children for social comparison and administered the BIFF 1, 2, 3, and 4 to these children. Thus, the phonological awareness skills of both groups of students were compared.

3. Findings

This study aimed to determine the effectiveness of the SESFAR Intervention Program in supporting the phonological awareness skills of children with ASD. The data demonstrated that the training improved the performance of the two children. Figure 1 and Figue 2 show the percentage of the four correct phonological awareness skills for the baseline, intervention, and follow-up sessions.

3.1. Findings on the effectiveness of the sesfar intervention program for Ayse

When Figure 1 is examined, in the first phonological awareness skill, separating sentences into words, Ayse's baseline correct response average was 14% (range 10-20%). Afterward, a total of 6 intervention sessions were conducted with Ayse using the SESFAR Intervention Program. After the first two sessions, the intervention sessions were interrupted in line with the COVID-19 pandemic circular, and they were resumed ten days later. Ayse responded 90% correctly in the first session and 100% in the subsequent five sessions. In the second skill, separating words into syllables, Ayse's average correct response rate in the pre-intervention probe and baseline sessions was 0%. This skill was taught with the SESFAR Intervention Program, and the desired criterion and stability level was reached in three sessions. Ayse responded correctly at 80%, 100%, and 100%. In the probe trials, she responded correctly at 100% and 100%, respectively. With Ayse, 30 trials, ten trials in each session, were conducted to teach the skill of separating words into syllables. The data collected in these sessions showed that Ayse acquired the skill of separating words into syllables. The average of Ayse's pre-intervention probe and baseline correct responses for the rhyme awareness skill was 10%. In other words, Ayse found one rhyme-like word pair out of 10-word pairs in the first four baseline sessions. With the SESFAR Intervention Program, a total of 3 teaching sessions and 30 trials, 10 in each session, were conducted. Ayse responded correctly at an average of 93% (range=90-100%) in the daily probe sessions. In the probe trial conducted with Ayse after the intervention sessions, she responded correctly at 90%. The data collected in these sessions show that Ayse acquired the rhyme awareness skill. In the skill of combining syllables, Ayse responded 0% correctly on average in five probe trials and three baseline sessions before the intervention. Then, the researcher started to conduct the SESFAR intervention to teach the skill of combining syllables. A total of 30 trials were conducted with Ayse, including

three intervention sessions and ten trials in each session. Ayse responded correctly at 80%, 90%, and 90% in the daily probe sessions. Since the criterion (80% and above) was reached in the intervention sessions, they were terminated.
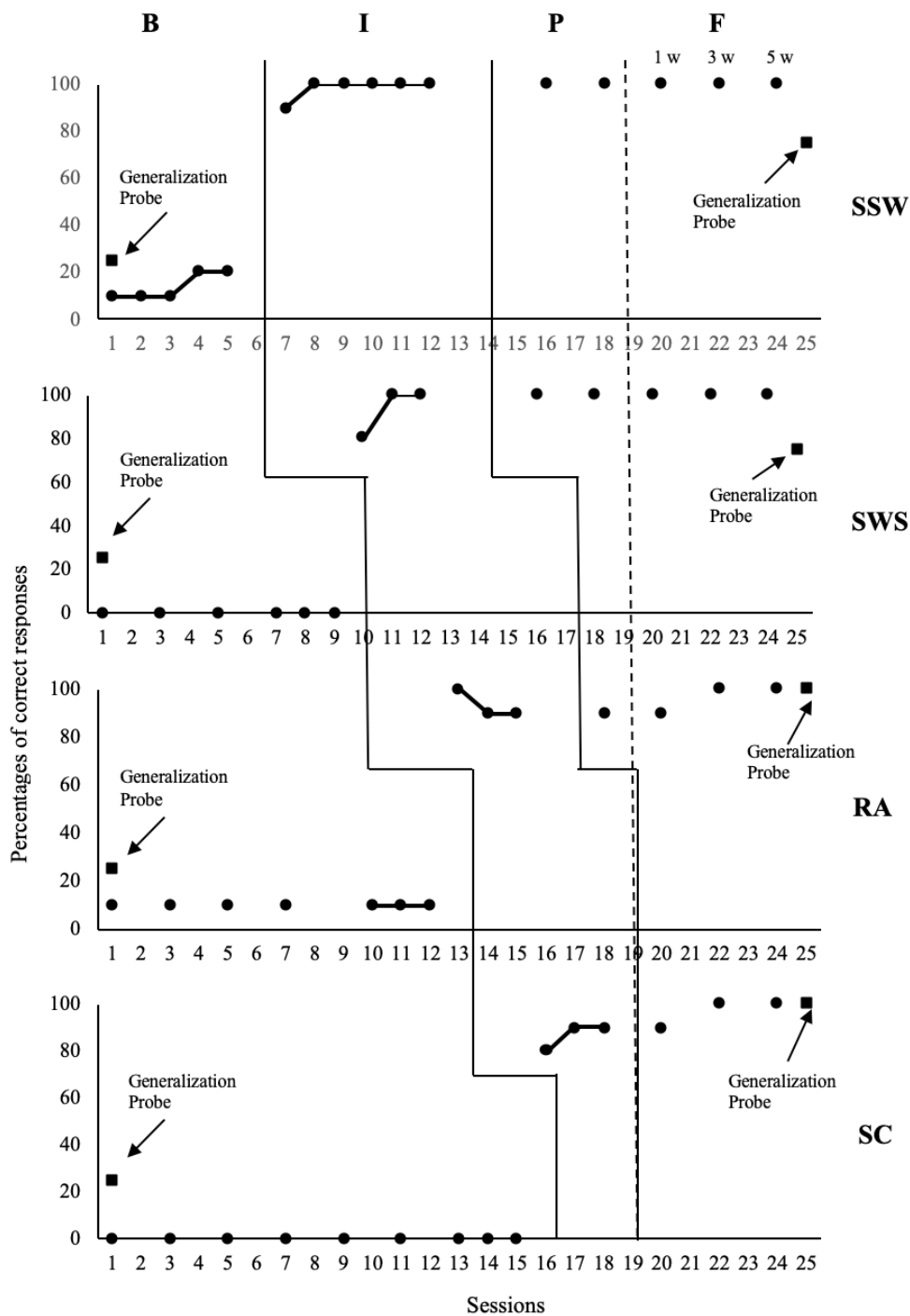

Figure 1. Percentages of correct responses of Ayse in the baseline (B), intervention (I), probe (P), follow-up (F) phases regarding the skills of SSW (Separating Sentences into Words), SWS (Separating Words into Syllables), RA (Rhyme Awareness) and SC (Syllables Combining).

3.2. Findings on the effectiveness of the SESFAR Intervention Program for Aras

When Figure 2 is examined, while Aras responded 0% correctly at the baseline level, he performed at an average of 86.6% (range=80-90%) in three intervention sessions. In the syllable segmentation skill, whereas Aras showed an average of 0% correct performance at the pre-intervention probe and baseline levels, he responded correctly at 80%, 80%, and 90%, respectively, in the daily probe sessions after the intervention was started. In the rhyme

awareness skill, Aras responded correctly at the level of 35% (range=30-40%) before the intervention and performed with an average accuracy of 93% (range=80-100%) after the SESFAR Intervention Program. In the last skill, combining syllables, Aras displayed an average of 0% correct performance at the probe and baseline levels before the intervention. They responded correctly at an average of 96.6% (range=90-100%) in the daily probe sessions.
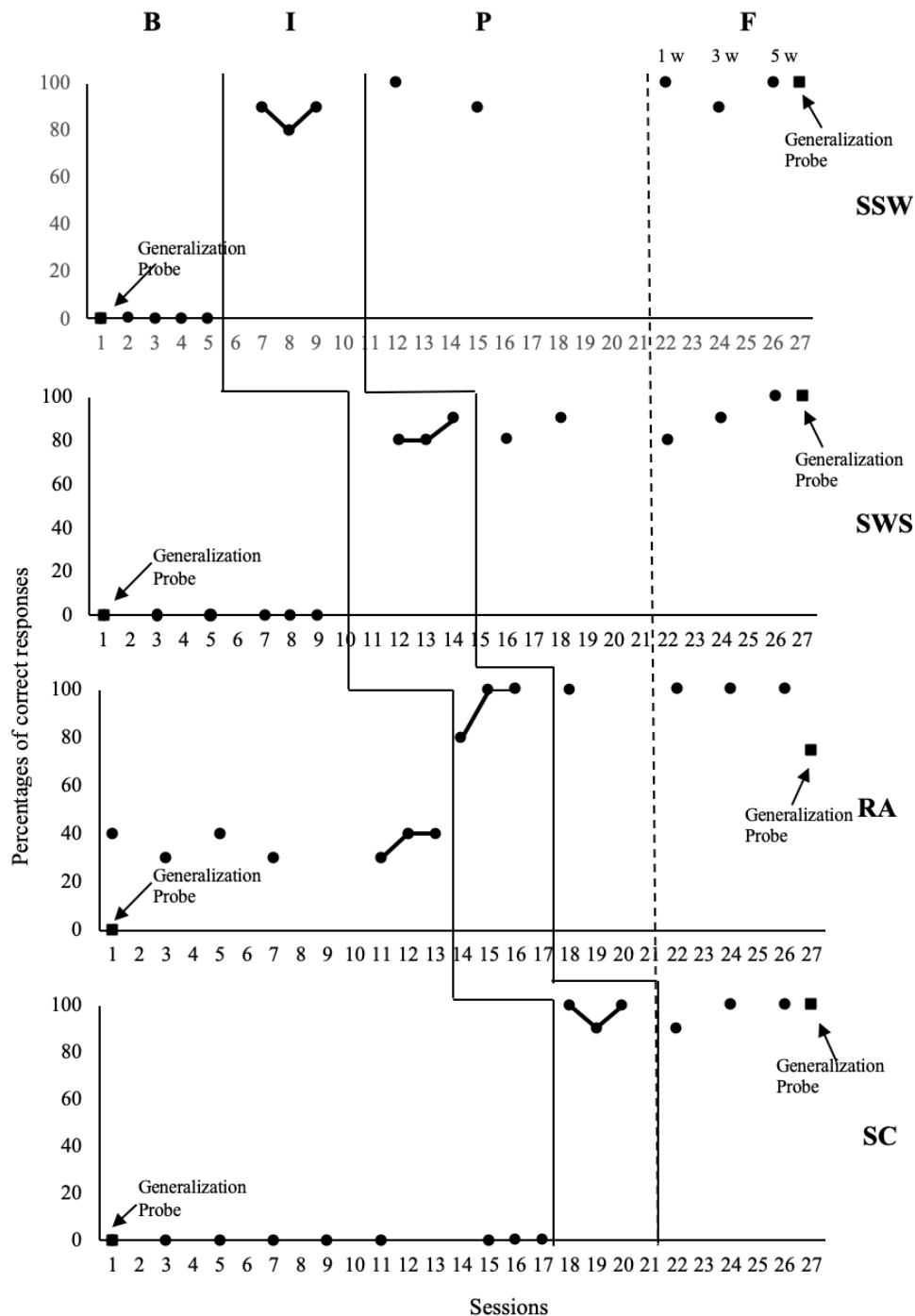
Figure 2. Percentages of correct responses of Aras in the baseline (B), intervention (I), probe (P), and follow-up (F) phases regarding the skills of SSW (Separating Sentences into Words), SWS (Separating Words into Syllables), RA (Rhyme Awareness) and SC (Syllables Combining).

3.3. Follow-up findings

The follow-up sessions were conducted with Ayse 1, 3, and 5 weeks after the end of the intervention sessions regarding the maintenance of phonological awareness skills. In the follow-up sessions, Ayse maintained the

phonological awareness skills she had acquired by performing the skill of separating sentences into words with 100%-100%-100% accuracy, the skill of separating words into syllables with 100%-100%-100% accuracy, the skill of rhyme awareness with 90%-100%-100% accuracy, and the skill of combining syllables with 90%-100%-100% accuracy.

One, three, and five weeks after the intervention, Aras maintained the sentence segmentation skill at an average of 96.6% (range= 90-100%), word segmentation skill at an average of 90% (range= 80-100%), rhyme awareness skill at an average of 100%, and syllable combining skill at an average of 96.6% (range= 90-100%).

3.4. Generalization findings

In the study, generalization data were obtained in three ways, including evaluating the SESFAR Intervention Program by the support education teacher with the EROT in the classrooms. Results are presented in Figure 1 and Figure 2. According to the EROT results, in the skill of separating sentences into words, Ayse scored 25% in the pretest and 75% in the posttest, whereas Aras scored 0% in the pretest and 100% in the posttest. In separating words into syllables, Ayse scored 25% on the pretest and 75% on the posttest, while Aras scored 0% on the pretest and 100% on the posttest. In the rhyme awareness skill, Ayse scored 25% on the pretest and 100% on the posttest, whereas Aras scored 0% on the pretest and 75% on the posttest. In combining syllables, Ayse scored 25% on the pretest and 100% on the posttest, while Aras scored 0% on the pretest and 100% on the posttest. These results showed that Ayse and Aras generalized the skills they had acquired with the SESFAR Intervention Program.

3.5. Social validity findings

The opinions of the students' mothers and teachers were obtained to investigate the social validity of the study. Interviews were conducted using the qualitative research approach, and data were collected using a semi-structured interview form. The following questions were asked of the children's teachers: Are phonological awareness skills essential? What kind of improvements did the SESFAR Intervention Program cause in your student? What do you think about the SESFAR Intervention Program? In which settings did you observe your students using their acquired skills? The teachers stated that phonological awareness skills were essential and that learning them before reading instruction would make it easier for children to learn to read. The teachers said that their students could tell how many words a sentence contained and that they started to separate words into syllables. They also stated that the picture cards and activities used in the program were beneficial. Teacher 1 said, "Ayse started to separate words into syllables by keeping tempo in the lessons. I realized that she had learned new words." Teacher 2 stated, "Aras' attention span increased in the lessons. He also learned the number of syllables and started to say words that rhyme with each other spontaneously."
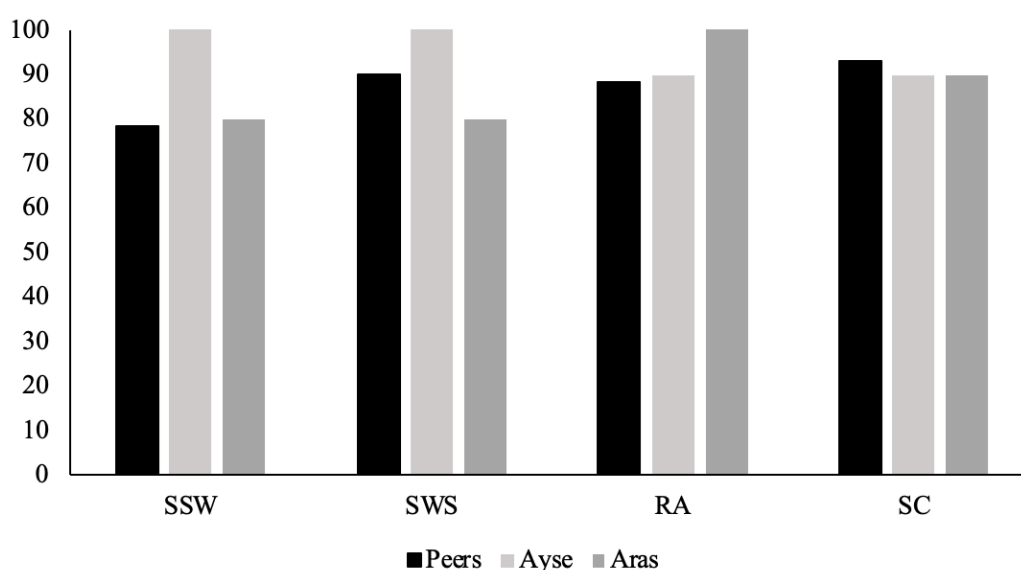
Graph 1. Comparison of the levels of realization of phonological awareness skills between participants and peers with normal development. SSW: Separating Sentences into Words, SWS: Separating Words into Syllables, RA: Rhyme Awareness, SC: Syllables Combining

In the study, the levels of the participants and 12 typically developing peers in performing the skills of separating sentences into words, separating words into syllables, combining syllables, and rhyme awareness were compared by conducting a probe session using the questions on the BIFF 1, 2, 3, and 4. The peers were asked to participate in one session for each skill, and the average of these sessions is shown in Graph 1.

Ayse correctly separated ten sentences from 10 picture cards into words and performed at 100% in the skill of separating sentences into words, correctly separated ten words from 10 picture cards into syllables and performed at 100% in the skill of separating words into syllables, correctly matched nine rhyme pairs from among 10 rhyme pairs and performed at 90% in the rhyme awareness skill, and correctly combined the resulting word by combining nine meaningful syllable pairs and performed at 90% in the skill of combining syllables. Aras correctly separated eight sentences from 10 picture cards into words at 80% in the skill of separating sentences into words, correctly separated eight words from 10 picture cards into syllables at 80% in the skill of separating words into syllables, matched ten rhyme pairs out of 10 rhyme pairs and performed at 100% in the rhyme awareness skill, and correctly combined the resulting word by combining nine meaningful syllable pairs and performed at 90% in the skill of combining syllables. The twelve participants in the reference group performed at an average level of 78.3% in the sentence segmentation skill, 90% in the word segmentation skill, 88.3% in the rhyme awareness skill, and 93.3% in the syllable combination skill. The study participants, Ayse and Aras, displayed phonological awareness skills at a higher level than the reference group.

4. Discussion

This study examined the effectiveness, maintenance, and generalizability of the SESFAR Intervention Program in teaching phonological awareness skills: separating sentences into words, separating words into syllables, rhyme awareness, and combining syllables for children with ASD. They also investigated the social validity of the SESFAR Intervention Program through subjective evaluation and social comparison. The study findings showed that the SESFAR Intervention Program was effective in teaching phonological awareness skills to children with ASD; children maintained the phonological awareness skills they had learned 1, 3, and 5 weeks after the intervention, and children could generalize these skills to different settings, different equipment, and different people, the children's teachers and mothers had favorable opinions about the intervention process, and children with ASD exhibited phonological awareness skills at a similar level to their typically developing peers at the end of the intervention.

4.1. Theoretical implications

The study's first finding is that the SESFAR Intervention Program is effective. Ayse reached the targeted criterion in the first intervention session for the sentence segmentation, syllable segmentation, and rhyme awareness skills (90%, 80%, and 100% for each skill, respectively), performed with 70% accuracy in the first intervention session for the syllable combination skill, and reached 100% accuracy in the subsequent intervention and probe sessions for all four skills. The findings on the effectiveness of the study overlap with the findings of research in the international literature on supporting early literacy skills (Fleury & Schwartz, 2017; Grindle, Carl Hughes, Saville, Huxley, & Hastings, 2013; Hudson et al., 2017; Kimhi, Achtarzad, & Tubul-Lavy, 2018) and phonological awareness skills (Heiman et al., 1995; Mohammed & Mostafa, 2012; Tjus et al., 1998) in children with ASD. For example, Kimhi et al. (2018) emphasized that children with ASD often display poor reading comprehension abilities and conducted a study to investigate a naturalistic, standards-based national literacy program for five kindergarteners with ASD aged 5-8 years. The researchers adapted the program for children with ASD, implemented it for six weeks, and demonstrated the effects of the study with pretest and posttest measures. They found that children with ASD acquired skills related to code and meaning. Furthermore, three studies (Heiman et al., 1995; Muhammed & Mostofa, 2012; Tjus et al., 1998) on supporting phonological awareness skills in children with ASD were found in the international literature. In the first study, the researchers examined the effect of the microcomputer program Alfa on supporting the phonological awareness skills of 11 children with ASD, nine children with various disabilities, and 10 typically developing children (Heimann et al., 1995). The study revealed that all participating children increased their phonological awareness and word reading skills. The following study replicated the first study (Tjus et al., 1998). In the last study, Mohammed and Mostafa (2012) conducted an intervention only for word recognition skills with a pretest-posttest control group experimental design. As a result of the study, the word recognition skills of children with ASD increased. As is seen, there are few studies (Heimann et al., 1995; Mohammed & Mostafa, 2012; Tjus et al., 1998) that aim to support the phonological awareness skills of children with ASD, and these studies do not aim to support the majority or all of the phonological awareness

sub-skills. Few studies (Heimann et al., 1995; Tjus et al., 1998; Mohammed & Mostafa, 2012) have focused on word recognition skills. To support the phonological awareness skills of children with ASD, the skills of separating sentences into words, separating words into syllables, rhyme awareness, and syllable combining were discussed separately, and the teaching of these skills was included in this study. The study found that students with ASD learned these four phonological awareness sub-skills. Hence, the study contributed to the literature in this respect.

The second important finding of this study is the systematic replication of the effectiveness obtained in Ayse for Aras. After it was determined that the SESFAR Intervention Program affected Ayse's phonological awareness skills, the intervention was performed with Aras. Thus, the effectiveness of the SESFAR Intervention Program on Aras' sentence segmentation, syllable segmentation, rhyme awareness, and syllable combination skills was examined. The results showed that Aras acquired the four targeted phonological awareness skills in three intervention sessions.

The third main finding of the study is that children with ASD maintained the phonological awareness skills they had learned after the intervention. There is no study in the literature investigating whether the acquisitions obtained after teaching phonological awareness skills to children with ASD were maintained. There are few experimental studies on supporting the phonological awareness skills of children with ASD (Heimann et al., 1995; Tjus et al., 1998; Mohammed & Mostafa, 2012), and there are no single-subject experimental studies. A longitudinal study (Dynia et al., 2019) examined the early literacy skills of children with ASD (Davidson & Ellis Weismer, 2014). In the aforesaid study, Davidson and Ellis Weismer (2014) longitudinally followed the early literacy skills of 127 children with ASD from age 5 to age 9. The study showed that the early literacy skills of children with ASD varied; children performed worse in comprehension skills and better in alphabet knowledge, while children with verbal language skills had good early literacy skills, the others had inadequate early literacy skills. In other words, if children with ASD do not receive any education, they continue to have inadequate early literacy skills. The finding from the present study is that children with ASD could maintain phonological awareness skills approximately one month after acquiring them. This result shows the importance of phonological awareness practices for children with ASD.

The fourth finding of this study is that children with ASD could generalize the phonological awareness skills they had acquired to different people, settings, tools, and materials. In the study, a different implementer applied the EROT in a different setting before and after the intervention, and it was observed that children with ASD could generalize the phonological awareness skills they had acquired according to the assessments with this tool. This study also showed that the SESFAR Intervention Program was generalizable. The generalizability of the SESFAR Intervention Program was ensured with the second participant in the study. The data from the baseline and intervention sessions conducted with the second participant with ASD demonstrated the external validity of the SESFAR Intervention Program, in other words, its generalizability. This finding will shed light on the research and practices to be conducted on phonological awareness skills and the SESFAR Intervention Program.

The fourth finding of the study shows that children with ASD can exhibit phonological awareness skills at a similar level to their typically developing peers, and the opinions of their mothers and teachers demonstrate the positive social outcomes of the intervention. The social comparison method provides clues about social validity to determine whether the child performs similarly to his/her peers. In the current study, social comparison data were collected to this end. Since few experimental studies in the literature support the phonological awareness skills of children with ASD (Heimann et al., 1995; Tjus et al., 1998; Mohammed & Mostafa, 2012), social comparison findings could not be found in the related studies. On the other hand, studies compare the early literacy skills of children with ASD and typically developing children (Dynia et al., 2014; 2017; 2019; Westerveld, Paynter, Brignell, & Reilly, 2020). For example, Dynia et al. (2019) compared the phonological awareness skills of 125 children, including 27 children with ASD, 28 with language impairment, and 70 typically developing children.

4.2. Practical implications

In addition to the four main findings, the present study yielded other significant results. The first is that the external validity of the SESFAR Intervention Program was proved. Ardal and Kargin (2019) developed the SESFAR Intervention Program for children with poor phonological awareness skills. The current study used the SESFAR Intervention Program for children with ASD. However, this study has three main differences from the study by Akdal and Kargin (2019). The first is that the current study was conducted with children with ASD, the second is the use of the multiple-probe across skills design, one of the single-subject research designs, and the last is that only the first four phonological awareness skills were taught instead of the eight phonological awareness skills included in the program. According to the findings, the SESFAR Intervention Program was effective in children

with ASD, and even teaching only the first four skills in the program could improve children's phonological awareness and early literacy skills. The study contributed to the literature and practices in this respect.

The researchers also revealed that six- and seven-year-old children with ASD who had not received literacy education did not have phonological awareness skills with the Early Literacy Test pretest data (EROT). The first child with ASD scored 0.25, whereas the second child scored 0.18 on the test. The cut-off score for the phonological awareness subtest of the EROT is 0.50, and those who score below this score are considered to need support in the relevant domain (Kargin et al., 2015). Likewise, according to the information from the baseline sessions of the SESFAR Intervention Program, the first child with ASD performed at an average level of 4% (the sum of all baseline data / the total number of trials in the baseline phase x 100) (27 / 110 x 100), while the second child performed at an average level of 5% (27 / 140 x 100) in phonological awareness skills. These findings reveal that children with ASD have very inadequate phonological awareness skills. Studies examining the phonological awareness skills of children with ASD (Smith Gabig, 2010; Lanter, 2009; Rosenberg, 2008; Kilic-Tulu, Okcun-Akcamus, & Ergul, 2023) found that children with ASD have significantly higher letter knowledge and significantly lower phonological awareness and vocabulary compared to typically developing children. Although the current study was limited to two students with ASD and twelve typically developing children, it supports the results obtained from the above-mentioned research. Despite the limitations of this study, it contributes to the literature.

The study revealed that typically developing children had average phonological awareness skills, whereas children with ASD had inadequate phonological awareness skills. Westerveld et al. (2020) compared the early literacy (phonological awareness and letter knowledge) skills of four-year-old children with and without ASD. They found that the levels of early literacy skills of the two groups did not differ. There are no social comparison studies in the literature. Moreover, few studies have compared the early literacy skills of children with ASD and typically developing children, and these studies have obtained different results. Therefore, there is a need for further research that compares the phonological awareness skills of children with ASD and typically developing children and performs social comparison after an intervention.

4.3. Limitation and future research

The present study has some limitations. The first limitation is that the study could not be conducted with children with ASD in the age group of 5 years and more. Although the participants of this study have not received literacy education, the SESFAR Intervention Program was developed for the 5-year-old age group. The fact that the study coincided with the COVID-19 pandemic made it difficult to reach children with ASD and prerequisite skills aged between 5-7. On the other hand, a cause-and-effect relationship was established for the effect of the independent variable, the SESFAR Intervention Program, on the phonological awareness skills of children with ASD, the dependent variables, and a solid functional relationship was revealed in the study. However, future studies can be conducted with a younger age group and a higher number of children with ASD. Another limitation of the study is that the entire content of the SESFAR Intervention Program could not be applied to children with ASD. The pilot study determined that teaching all the sub-skills of the SESFAR Intervention Program took a very long time, and considering the COVID-19 pandemic, the first four skills were taught instead of the eight skills that make up the SESFAR Intervention Program. However, it is recommended that the entire content of the SESFAR Intervention Program be applied to children with ASD in future research.

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Author contribution statements

The researchers produced this study from the first author's doctoral thesis under the supervision of the second author. The study's applications were conducted under the second author's supervision and guidance. Elif Sazak Duman, by mentoring and guiding the first author in the practice of the study, prepared the article for publication.

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The authors reported no potential competing interest.

Ethics committee approval

All responsibility belongs to the researchers. The research related to human use has complied with all the relevant national regulations and institutional policies and, by the tenets of the Helsinki Declaration, has been approved by the author's institutional review board or equivalent committee. The implementation of the research was carried out with the approval of the Governorship Provincial Directorate of National Education, dated 12/11/2019 and numbered E-2020/01.