

MOTIVATIONS FOR THE PROFESSION AND CAREER ADVANCEMENTS AMONG TEACHER CANDIDATES IN THE CARPATHIAN COUNTRIES

Associate Professor Dr. Pál Iván SZONTAGH

(Károli Gáspár University of the Reformed Church, HUNGARY)

szontagh.pal@reformatus.hu

Orchid: 0000-0001-6714-9852

Abstract

We suppose that today, the motivation for the career of a pedagogue (including its existential, organizational and infrastructural conditions) is different from the level of commitment to the profession of an educator (which can be experienced informally, or outside of the public education system). In our research, we made efforts to address the widest possible range of student elementary teachers and to interpret their responses using different filters. In the first phase of our study, we analyzed first-year kindergarten teacher students' career motivation and commitment to the profession, and in the second phase, that of final-year kindergarten teacher candidates. In the third phase, we conducted surveys to explore students' motivation for the profession and the career path of a pedagogue in four countries of the Carpathian Basin (Hungary, Slovakia, Romania and Serbia). The surveys were conducted in 17 campuses of 11 Hungarian teacher training colleges and universities. Finally, we extended the survey to practicing graduates preparing for their on-the-job rating examination. Based on our results, in all breakdowns, regardless of age group, training institute or - in part - geographical location and nationality, it is proven that lack of social- and financial esteem of the profession poses serious risks for recruitment and retention of teachers.

Keywords: *career motivation, career socialization, professional motivation, teacher training*

Introduction

The attractiveness of the educator's career path, the number, quality and motivation of candidates starting this profession have been in the focus of domestic and international professional discourse for decades now. At this point, public awareness of the issue of scarcity of teachers and the need for young candidates are starting to take hold. Though the fact that the quality of education strongly depends on the personality, qualification and motivation of the educator is proven by several, widely known and recognized studies (Barber-Mourshed 2007; OECD 2007), this did not prevent unfavorable tendencies of the past periods to continue or even intensify. In Hungary, unfavorable perception of the educator's career is nothing new: starting in the 90s, several types of research suggest the unattractive career advance- and income opportunities the profession offers (Kocsis 2002; Veroszta 2015). "In comparison with other professions, the profession of teaching is perceived by students as a profession with low social and financial recognition" (Veroszta 2015:49). This is supported by a shortage of educators, becoming more obvious by the year. In 2017, 41 percent of teachers were aged 50 or older, with only 6 percent of them below 30. The dropout rate in teachers' bachelor's programs is high, and less than half of the graduates take an actual job in the profession (European Commission, 2020:38). The number of entry-level teachers does not cover the number of their retiring colleagues. Teachers' starting salaries are one of the lowest in the EU (Eurydice 2018/2019). By 2019, the level of teachers' salaries compared to the national median wage had decreased to the level of wages before the gradual wage correction starting in 2013.

As per the Hungarian Central Bank's competitiveness report for 2020, "like in the rest of the EU countries, financial recognition of the profession of educators is lower than that of other professions requiring higher education. In Hungary, despite the introduction of a career development model, the average wages of public education workers only amount to 64-74 percent of the wages of other workers with higher education degrees. (...) In Hungary, in the wake of the implementation of the educators' career development model in 2013, teachers' salaries saw a significant raise, however, since that time, those wages failed to keep up with the dynamic wage increases experienced in other industries. Wages below expectations push back interests in the profession and give rise to career

changes” (MNB 2020). This relative wage situation awaiting entry-level colleagues affects graduates’ decisions to whether start their career as a teacher/remains in the profession. “ The salaries of teachers between the ages of 25-34 working in kindergartens and elementary schools are the lowest in comparison with higher education graduates of the same age, but working in other European countries (with adequate data)” (Varga 2019: 115). Máthé argues that “the guarantee of setting up and maintaining high-quality education is to ensure that teachers who enter the profession form a high-quality educators’ base, and they are motivated to stay in the career field. The prerequisite of the latter is the implementation of an adequate motivation system. If competent people enter the profession, this could start a positive upward spiral” (2018:18).

The study was conducted to explore students’ motivation for the profession and the career path of a pedagogue in four countries of the Carpathian Basin

Methods

We suppose that today, the motivation for the *career* of a pedagogue (including its existential, organizational and infrastructural conditions) is different from the level of commitment to the *profession* of an educator (which can be experienced informally, or outside of the public education system). In our research, we made efforts to address the widest possible range of student elementary teachers and to interpret their responses using different filters. In the first phase of our study, we analyzed first-year kindergarten teacher students’ career motivation and commitment to the profession, and in the second phase, that of final-year kindergarten teacher candidates. In the third phase, we conducted surveys to explore students’ motivation for the profession and the career path of a pedagogue in four countries of the Carpathian Basin (Hungary, Slovakia, Romania and Serbia). The surveys were conducted in 17 campuses of 11 Hungarian teacher training colleges and universities. Finally, we extended the survey to practicing graduates preparing for their on-the-job rating examination.

As a measurement tool, we used the adapted version of the FIT-Choice Scale (Factors Influencing Teaching Choice Scale) (Richardson–Watt 2006; Watt–Richardson 2007, 2012). The use of a unified measurement tool allows the comparison of different breakdown groups.

We based our study on the following hypotheses:

- a) Students' commitment to the profession is stronger than their commitment to their careers.
- b) Students of religious higher education institutes have a stronger commitment to the profession than their non-religious counterparts, and in the former group, the gap between the motivation for the profession and the career is also wider.
- c) Participants of Hungarian (minority) teachers' training beyond Hungary's border have a stronger commitment for the profession than students of institutes within Hungary's territory, and the gap between the motivation for the profession and the career is also wider for the former group.
- d) The career motivation of senior students is stronger than that of first-year students, which serves as indirect proof of higher education institutes' successful career socialization efforts.
- e) The career motivation of correspondence students is stronger than that of full-time students. More naive, primitive ideas about the pedagogue's career are present in the latter group. We suppose that this is because the family-friendly and versatile nature of the career is more attractive for correspondence students, who already have experience in the workforce, and in many cases, they also have families.

Results

Generally, the responses of various respondent groups are only slightly different. In a few cases, our analyses revealed differences in the responses of individual respondent groups that are worthy of further exploration.

Our research has proven that for *kindergarten teacher candidates*, motivation for the profession is a determining factor. When choosing the specialization, the most determining factors fall within the scope of professional motivation, both for correspondence- and full-time students. Career motivation of first-year kindergarten teacher correspondence students has proven more versatile and mature than that of full-time students; more naive, primitive ideas about the pedagogue's career are present in the latter group, and the family-friendly and versatile nature of this career are more attractive for first-year kindergar-

ten teacher correspondence students (Szontagh 2021a). However, among senior kindergarten teacher students, the differences of professional commitment- and career motivation results between that of full-time- and correspondence students were not proven by the total average of the two groups. The majority of senior kindergarten teacher students would choose kindergarten teacher specialization again (70 percent of full-time students and 65 percent of correspondence students) and 78 percent of them intend to start a job as a kindergarten teacher after graduation.

The two types of research (among first-year and senior kindergarten teacher students) of different methodologies but with the same content clearly show that students don't just choose to be kindergarten teachers as plan "B", or because they simply couldn't come up with a better idea, but out of intrinsic professional motivation, which remains with them even after graduation. Career socialization reinforces their professional self-image, and their intention to enter the workforce as kindergarten teachers remain unaffected by the insights they gain in terms of workload and academic- and practical requirements associated with the profession.

Elementary teacher students' commitment to the profession is stronger than their commitment to the career. The aggregate evaluation of professional motivation items indicates a value of nearly one increment (0,9446) higher than that of career motivation, on a scale from 1 to 4. Deviations measured within the two surveys were largely the same (0,34087 and 0,36148).

Based on the results of *state- and church-run school students*, we established that students of church-run schools are slightly more motivated for the profession than their counterparts studying in state-run schools. The gap between Hungarian church-run school students' professional- and career motivation is also wider than that of state-run school students. This is particularly true for elementary school teachers' training (Szontagh 2021b).

Our findings show that professional motivation is not affected by the (*successor*)state the student is studying and living in. In this profession, the values shared by the Carpathian Basin's Hungarian student teachers are a lot stronger than the differences inherent in their life situations. However, in terms of career motivation, the differences between the answers of the two groups are more significant. On a scale from 1 to 4, all differences exceeding (!) or nearly reaching 1 increment are related to the financial and

social recognition of teachers. The virtual gap in how these questions are perceived on the two sides of the Hungarian border is huge - being a lot lower within Hungary.

In analyzing the responses of *first-year- and senior students*, it becomes obvious that despite partial results confirming training institutes' career socializing efforts (e.g. the results of the items "possesses the qualities of a good elementary teacher" or "had positive learning experiences"), low social prestige and financial frustrations increasing as the training goes forward and as the cutoff for decision closes in make students more and more insecure in their decisions. Training institutes professional motivation efforts are not sufficient to offset these external factors present outside of the scope of teachers' training

Correspondence students' professional- and career motivation is lower than that of *full-time students*, and also, remains below that of the full sample. Though it is a proven fact that correspondence students' professional motivation entails more mature and less naive ideas about the profession, and more realistic considerations lead to their career change, they are even more skeptical regarding the career awaiting them as their full-time counterparts.

Last but not least, based on the findings of surveys among *practicing teachers* preparing for their on-the-job rating examination, it can be established that the time spent in the profession doesn't affect professional motivation to a significant extent; the joy and opportunities inherent in dealing with children still motivate practicing teachers. At the same time, answers show that after a certain time, the strongest demotivating factor is not the low salary, much rather the lack of social recognition. The career motivation of practicing teachers is lower than that of any students' subgroup, and this is even though samples only entail subjects preparing for their rating examination and engaging in continuation pieces of training, who are positioned relatively high in the teachers' career ladder.

As a summary, we searched for significant differences between the professional- and career motivations of the three respondent groups (kindergarten teacher students, elementary teacher students and practicing teachers), i.e. the motivation factors that change the most with education and/or with the time spent on the job.

Responses of final-year kindergarten teacher students (N=50), final-year elementary school teacher students (N=109) and practicing teachers preparing for their on-the-job rating examination (N=20) were subjected to a single-factor variance-analysis, using the

method Analysis of Variance (ANOVA). In our analysis, we found that a total of nine items show significant differences between the given respondent groups.

Significantly more practicing teachers stated to have had good teacher role models than respondents of any other students' subgroup. This shows that the significance of role models in the training and during the career is substantial. This also indicates the importance and significance of a formal and informal mentoring system in public education. (Nagy 2004, Paksi et al. 2015). "Those, who, despite a low social esteem and insufficient wages or alternative opportunities on the labor market, still choose to remain in the profession (...) base their decision to do so on experiences from a few specific jobs.' (Halász 2015: 27).

In terms of positive learning experiences, the differences between the responses of practicing teachers and kindergarten teacher-students are also significant (with various deviations). This is presumably resulting from the low admission requirement level of kindergarten teacher specialization, and the "life-long learning" attitude of practicing teachers preparing for the rating.

Student and practicing elementary school teachers find teaching and education of children a lot more emotionally exhausting than kindergarten teacher students, which suggests a difference in their approach towards educational tasks and their professional attitudes.

In terms of career motivation, it didn't come as a surprise that entry-level teachers or senior students value the mobility motivation of the profession significantly more than practicing teachers, many of them with families.

Students' responses accurately reflect significant variations of teachers' incomes: kindergarten teacher students perceive the expected lucrative in the career as significantly lower than elementary school teacher students (both values are extremely low)

While kindergarten teacher students are held back from exercising the profession by the expected low income the most, the main demotivating factor for practicing educators is lack of social prestige. In this field, their results are significantly lower than that of student elementary school teachers.

As expected, external factors of career perception (i.e. Where acquaintances try to dissuade respondents from becoming a teacher) impact students' groups more than they impact practicing teachers about to take their rating examination. Part of this may be caused by the international trends, i.e. that in older times, family and friends encouraged

candidates- or practicing teachers, while today, they rather discourage them from their profession (Richardson–Watt 2006).

Conclusions

Based on our results, in all breakdowns, regardless of age group, training institute or - in part - geographical location and nationality, it is proven that lack of social- and financial esteem of the profession poses serious risks for recruitment and retention of teachers. Furthermore, it is also true that “the most common argument against the educators’ profession is lack of recognition; in addition to, or rather as part of the social esteem entailing complex social attitudes and professional elements, the career’s lack of “creativity” is another factor weighing against it” (Chrappán 2013:236).

We found that in the long run, these disadvantages override all internal motivations and render the career socialization mission of teachers’ training greatly difficult, if not impossible. In line with several other types of research (e.g. Veroszta 2015), our results also show that students’ choice of profession is not supported by a favorable career perception. As per the professional discourse, the choice of teachers’ training mostly refers to a choice of higher education institute only, and it is not to be considered as a commitment for the career field. (Hajdú 2001). Nowadays, it might as well be true that “when enrolling to teachers’ training colleges, students are highly motivated, but are less conscious. Their motivation comes from their own school experiences, their teachers’ impacts, and more often than not, their unrealistic pictures of the career field” (Hajdú 2001:35). Our study shows that throughout the training and internships, part of this naive professional motivation transforms into a conscious career perception, and at the same time, experienced teachers’ work- and life conditions often discourage students.

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TEACHING AT A DISTANCE: LEARNING FROM THE EMERGENCY REMOTE TEACHING EXPERIENCES

Abel Jr. ALVAREZ (Far Eastern University, PHILIPPINES)

aalvarez@feu.edu.ph

Orchid: 0000-0002-2319-6881

Abstract

Indeed, all of us are vulnerable in these trying times. Teachers, like students, are also experiencing various challenges as they face the call for continued learning of students at the time of emergency remote education. While some literature pointed out that remote teaching and learning is already happening even prior to the pandemic crisis, it is also necessary to understand and investigate the experiences of teachers who were suddenly immersed in teaching at a distance. Hence, a qualitative case study research design was employed to examine the emergency remote teaching experiences of ten higher education facilitators handling National Service Training Program course in one of the top-tier universities in the Philippines. There were three themes revealed in this study: teaching with care and empathy, teaching in a digital divide society, and teaching in an emergency world with pressure and anxiety. Interestingly, while teachers also experience a variety of emotional and behavioral challenges, it is also undeniable that they ensure to have a safe space and a meaningful learning environment even teaching and learning are separated by time and space. Learning from the voices of the teachers is as important as students' voices. Thus, it is vital to recognize and appreciate the efforts exerted by teachers amidst the pandemic crisis.

Keywords: *Distance Teaching; Emergency Remote Education; Online Teaching; Pandemic; Teaching Experiences*

Introduction

The disruption in education which was caused by Covid-19 resulted in temporary closures of schools, colleges, and universities globally (Bozkurt et al., 2020; UNESCO, 2020). This phenomenon did not only affect the students learning but also challenges educator's way of delivering their instruction. Some studies emphasized that remote teaching has been happening even before the Covid-19 pandemic crisis happens. In some geographical areas affected by natural disasters have to resort to alternative ways to ensure that learning still continues (Joshi et al., 2018). Another literature illustrated that the decades of war and conflicts, such as in Arab countries like Syria, created a catastrophe in the region which also affected the children's way of learning, thus, addressing these problems through remote teaching (Ramadan, 2017). These contexts presented provide a picture that emergency remote education is happening endemically to address learning gaps and circumstances. Moreover, it cannot be denied that the impact of Covid-19 to the lives of not only of the learners but also to teachers have resulted to a catastrophe in adopting to teaching at a distance (Bozkurt et al., 2020). In this Philippines, for instance, the mandate to ensure that learning continues serves as an oath that, despite the odds that the education system is facing, Filipino educators are adaptable and flexible in providing quality emergency remote teaching to its students. However, the challenge of urgency in shifting to emergency remote measures (Bozkurt & Sharma, 2020; Bozkurt et al., 2020) paved the way for some educators to become confused and hesitant to handle teaching roles in a remote classroom setting (Giannini, 2020).

There are also educators who questioned their self-readiness on to the use of technology-based platforms for instructional delivery, assessment, and evaluation of students' learning performances. In fact, this phenomenon has been described as "most educators seemed to be learning online and remote teaching strategies and tools while teaching online or remotely aka building the plane while flying it" (Whalen, 2020, p. 193). This reflects the laxed of educational agencies and institutions in investing and providing professional training and development focusing on technology-based teaching programs has become a present ill problem of teachers teaching with technology (Foulger et al., 2017).

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No wonder that educators faced various stressors and barriers brought about by emergency remote teaching and learning environment since there was lack of preparation and supports provided prior to this pandemic crisis in the Philippine education system.

While these studies are much concerned about the preparations and readiness of educators in the time of emergency remote education, there were also scarcities when it comes to the teaching journey of educators in emergency remote teaching. One must remember that, although the students are the center of the teaching and learning process, the teachers also play an essential role in the classroom environment. There is really a need to understand the journey of educators who are teaching at a distance considering the challenges presented by various literatures even prior to the current educational situation brought about by the pandemic crisis. It cannot be denied that all of us are vulnerable, and that is the fact. Teachers are also susceptible in these trying times (Talidad & Toquero, 2020) and, as human beings, they also need psychological and emotional support to make teaching and learning continues. Therefore, this study aims to investigate the journey of educators who were teaching remotely in one of the top-tier universities in Manila, Philippines. Their shared reflexivity serves as a way of giving them a voice about their remote teaching experiences, insights, and stories that are worth being given attention and interest.

Methodology

Research Design

Since this study aimed to understand and investigate the teaching journey and experiences of educators in a particular higher education context in the Philippines, the researcher employed a qualitative case study research design to deeply understand a particular phenomenon (Creswell, 2014). Both Stake (1995) and Yin (2014) also identified a case study as a bounded system which in this study focused on higher education teachers handling NSTP courses in a specified university in Manila, Philippines during the school year 2020-2021. Through utilizing a case study research design, I was able to grasp and make sense of the shared reflexive experiences of the participants (Yin, 2014).

Research Participants and Locale

The locality of this study lies in the capital city of the Philippines – Manila and is considered to be one of the top-tier universities, not only in the district of Manila’s university belt but in the entire Philippine archipelago. Interestingly, this university was one of the proactive universities in the Philippines that have invested prior to the pandemic on Learning Management System to make learning accessible beyond the traditional classroom set-up.

This, in turn, provided the university to adapt smoothly to the emergency remote situations. However, it is noteworthy to investigate the experiences of ten purposively selected NSTP higher education facilitators who have been immersed with asynchronous teaching during the COVID-19 situation in the Philippines. They were selected based on their inclination to share their reflexivity paper about asynchronous teaching journeys during the school year 2020-2021.

Data collection and ethical considerations

Since health protocol measures, such as limitations on face-to-face, wearing of masks, and observance of physical distancing, were in place in the entire country, the researcher decided to gather the data by collecting the semester-end reflexive paper of the NSTP facilitators. Through this form of data gathering, it allowed me to examine their reflective asynchronous teaching journey by looking into their reflective practice.

The use of reflective practice served as leeway to critically rethink their teaching strategies, assessment practices, and at the same time, to rethink as well with regards to their own learning journey as educators especially in this time of uncertainties. I was provided by the office to examine and analyze ten reflective papers. This process gave me the opportunity to look at and explore their reflective insights with regard to the phenomenon being investigated (Creswell, 2014; Sonesson et al., 2018). All raw data from the reflective papers were anonymized (e.g., P1 or participant 1). In this way, it served to protect the identity of the participants, and their answers were stored in a password protected database to ensure confidentiality of their shared reflective information.

Data analysis

The transcripts of the reflective paper were read and re-read to better grasp the reflective insights of the participants, thus, it provided to make sense out of these data. The data were manually coded (Basit, 2003) and the transcripts were transferred to Microsoft Excel spreadsheet for better visualization and easy identification of codes. The phase of re-reading the transcripts made it substantial for me to deeply understand their reflexive information as it employed rigor in analyzing qualitative data.

Moreover, the use of Braun and Clarke's (2013) thematic analysis facilitated detailed phases of codifying the data where a chunk of codes was identified. From these chunks of codes, I presented the initial results with other colleagues and experts from the field to ensure the trustworthiness of the data and increase the credibility of the future findings (Lincoln & Guba, 1985; Merriam, 2002). It was then refined and categorized into a set of themes and discussed the results of the study from the lenses of empirical and related studies.

Findings

The first theme reflects the untiring journey of the higher education facilitators in providing the act of caring and understanding to their students. The theme of *teaching with care and empathy* portrays the notion of going the extra mile to ensure that students are learning, and, at the same time, they are also being provided with proper emotional support considering the vulnerability brought by the pandemic crisis.

“Being a facilitator during the pandemic is very challenging. I have to deal with every student's concern, and I really gave all my patience and consideration to all of them. As a facilitator during this time, we need to show empathy to our students.” (P4)

“Since this pandemic, I have given them a lot of extension in submitting the task, just because I understand what they are feeling right now.” (P7)

This phenomenon resulted as well in the need for educators to ensure timely feedback. P1 shared that attending religiously in answering the queries and concerns of students is one way to ensure efficient delivery of asynchronous instruction. Thus, it entails that having a well-communicative space and an emphatic learning environment supports having a caring learning experience in a virtual classroom environment.

“It was really hard for me also to look at some of the students without any submissions. So what I do is that I consistently remind them and message them individually to submit the required assessments. I try my best to be for my students as necessary as possible and I am thankful that this semester has been great for me as it allowed me to be the facilitator my students need – compassionate and understanding.” (P2)

“While we aspire for inclusivity, we also forget that there are students who were being left behind because of these challenges. As a facilitator, I ensure to provide a caring and understanding learning environment by attending immediately to the concerns of my students and providing timely feedback to their submitted outputs. Lastly, I also allowed them to voice out their queries and concerns to address the teaching and learning gaps.” (P5)

While the first theme focuses on teachers as care providers of pedagogical aspects, no one escapes with the idea that teaching in these trying times creates a dystopian reality of digital division. This theme about *teaching in a digital divide society* showed that not only the students are experiencing accessibility issues and internet connectivity problems, but educators who are teaching asynchronously also experiencing the same dilemma.

“Communication was difficult for all us facilitators and students, also the recent calamities have pushed the resiliency of fellow students.” (P3)

“Communicating with students is most challenging because not everyone has a stable internet connection, including myself. Many of my students sent me a text message informing me that they do not have an internet connection so they cannot submit the requirements.” (P6)

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Additionally, the need to have open and constant communication plays an important role in dealing with the students learning at a distance. These educators are looking for other communication channels to ensure that the concerns of their students were being promptly attended to.

“A lot of adjustments have to be made, with the ever- problematic intermittent internet connections in the country, many of my students were not able to comply with the set deadlines in passing the requirements needed to pass the course. Constant communication and reaching out to these students through the use of social media, canvas, and MS Teams are just some of the tools I’ve used.” (P8)

“As a facilitator, you need to do everything to reach out [to] your students because sometimes they need thorough instructions to be able to understand their course requirements. If I did not message him directly, he will really have an F grade.” (P4)

Lastly, the journey of educators in this time of the pandemic crisis depicts that they are not heroes, hence, they are also vulnerable to stress brought by the COVID-19. They also experienced burdensome and feeling of hopelessness. Thus, the theme of *teaching in an emergency world with pressure and anxiety* represents educators’ survival instinct. The need to act their roles as classroom teachers coincide with the emergency remote education situation and emerging roles they play in their families. P9 emphasized the challenge brought by the emergency remote teaching, which was not limited to connectivity issues, but teachers are not exempted as well with the anxiety they feel due to the COVID-19 phenomenon.

“Millions have lost their jobs, not to mention those that were directly infected by the COVID-19 who got hospitalized and the agony to their families, even horrifying to all those who lost their battle with the virus. I can’t imagine the pain it has caused to the bereaved family. They say [the] year 2020 is a difficult

year for all of us but still thankful and motivated because that's the best thing that we need to do to survive." (P10)

Moreover, these uncertainties make educators worrisome about their teaching responsibilities and their family duties. However, despite the odds, they still tried to manage to ensure in providing quality instruction even in remote context for students' continuous learning engagement by reaching out with their students and giving them the opportunities to comply with all the requirements and backlogs they have to submit.

"All of us have the uncertainty of the future and we still need to find out how are we going to get through with this challenge. As a facilitator, it is hard for me to be strong for my students as I also experience the same as with them...And I thought of being lenient to them and give them more time for them to provide the assessments required." (P2)

Discussion

The reflective practices shared by the participants represent their untiring journey of teaching experiences despite experiencing vulnerabilities at the time of the pandemic crisis. It also shows the depth of their reflective thinking as they navigate the flow of uncertainties towards fulfilling their roles as educators across time and space. Despite the odds that they have shared, they also saw the light to make learning a caring, understanding, and safe space for everyone. Interestingly, while most of the participants shared that they cannot just sit back and wait for their students to comply, their instincts, as students' second parents, require them to reach out and to look into the wellbeing of their learners by having constant reminder and alternative communication channels.

The theme of teaching with care and empathy shows no boundaries that everyone is vulnerable and can be a victim of the pandemic crisis. Indeed, the call of educational and government institutions to search for alternative teaching and learning delivery to ensure that learning is continued was a great parameter. However, it is also necessary to call for empathic teaching and learning environment where everyone cares and channels

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a supportive and collaborative environment (Alvarez, 2020a; Corcuera & Alvarez, 2021; Bali, 2020; Bozkurt & Sharma, 2020a; Bozkurt & Sharma, 2020b; Bozkurt et al., 2020).

As a developing country where various socio-economic problems, such as poverty and digital division exist are present even prior to the pandemic crisis (Schia, 2018; Warf, 2019). Nevertheless, the challenges brought by COVID-19 made the situation worse as it results in extreme conditions which affect not only the mobilization per se but also had impacted one's emotional and psychological behavior. Teachers, being immersive with the situations, ensure that as much as possible they relate and connect with the circumstances of their students and provide space for emphatic communication. Moreover, as learners deal with the problems of digital division, educators also feel the same dilemma. These challenges are not considered to be new in the Philippine context as revealed by other researchers (Alvarez, 2020b; Alvarez, 2021). In fact, the Philippine internet connectivity is one of the slowest not only in Southeast Asia but also in the rest of the world. This phenomenon lights out the existing issue about access to quality internet connectivity. And while the world is preparing for the new normal in education, some of the developing countries like the Philippines is still struggling in breaking the chain of the digital divide. With this, in turn, educators learned to adapt to the situation and search for alternative communication channels to reach out to their student's needs and concerns.

At the same time, it was highlighted in the findings that educators are vulnerable to the pandemic crisis (Talidong & Toquero, 2020). It also shows that while numerous studies give emphasis to students learning experiences and journeys in emergency remote education, it is also fair to lend our ears and to give voice to the struggles and experiences of educators.

Therefore, educational institutions have a huge role to play by ensuring to provide adequate psychological support and emotional intervention for their educators who are experiencing pressure and anxiety in teaching in this time of emergency remote education. For instance, they can provide psychological assistance hotlines, webinars, and counseling sessions to address the psychological fatigue and anxiety of educators. Thus, this reflects educators' need to survive by addressing and providing support as well in terms of their psychological and emotional behavior which was greatly impacted by the pandemic crisis.

Conclusion

Yes, the primary center of the teaching and learning process is indeed the students, however, we must remember that the one who cares for the students also needs to be given a voice to share and understand their teaching journey and experiences in the time of emergency situation. Teaching in these trying times is not easy as imagined by most of us. While we see emergency remote education as compliance for learning continuity, it is fair as well to deeply understand the efforts extended by educators.

The empathy and understanding they provide are worth to be appreciated since they are also humans who are experiencing life circumstances brought by COVID-19. More importantly, we must remember that the ones who nurture and provide for the learning needs of the students also need a caring and understanding environment. Like anyone else, educators are also victims and vulnerable at this time. Therefore, one must learn to appreciate and recognize the efforts of educators in emergency remote teaching.

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TEACHING AND LEARNING THROUGH INNOVATIVE APPROACHES IN ENGINEERING CLASSROOM SETTING IN BHUTAN

Dr. Hemlal Bhattarai (Jigme Namgyel Engineering College, BHUTAN)

b.hemlal@gmail.com

Orchid: 0000-0002-6512-1685

Abstract

Teaching and learning activities in a classroom setting have been enhanced in current times where more participatory approaches are followed from pre-primary to tertiary level of education. While thinking participatory approaches, innovative approaches are always essential to be device so that maximum can be derived from classroom activities. The approaches may vary from different aspects but the objectives are mostly to garner focus, creativity, concentration and participation in the classroom activities which will enhance the overall grasp of the teaching and learning activities.

This study through the primary sources is intended towards exploring three innovative approaches in classroom activities with the assessment of the same at the end of the semester (i.e. Syllabus). The qualitative data obtained through survey questionnaires shows that the three innovative approaches in the form of meditation, review and question-and-answer sessions show that there is promising potential in the enhancement of focus, concentration, creativity and participation in students.

Keywords: *activities, focus, innovation approaches, participation, teaching and learning*

Introduction

Innovative approaches in academic activities are key pillars of teaching and learning. The key innovative approaches for this study as reflected below are meditation, review and question-and-answer sessions. Mata (2012), Moree (1992), Aqliulova and Pnyagin (2021) shared the essence of meditation in religion, as well as other aspects, is known to be gaining popularity. Similarly, Baesler (2015) reflected that classroom meditation and directed meditation are being recommended for a better outcome from class activities. Farb. et.al. (2009) further shared that mindfulness and creativity are two critical aspects that are also discussed in an academic font for bridging the better linkages of these two.

The other aspects of attention in class as Nayir (2017) are through participatory approaches as student engagement is crucial in achieving teaching and learning. Maher (2013), Biech (2015) found out that the thirst is always looking for strategies for making the classroom more engaging so that the actual intentions of subject delivery as well as retention can be achieved. Some approaches can be like a review of the completed class lecture and associated questions and answers sessions within the class hours.

In this study, the innovation in classroom teaching and learning has been approached through three modes of interventions after realizing the need for innovative approaches in the middle of the autumn semester 2021 (i.e., the semester is of 16 weeks classes where the approaches initiated after 8 weeks of classes). The approaches incorporated were the mix of the following:



Figure 1. Three innovative interventions in the classroom

The meditation session was devised in such a way that each student in a class was asked to come up with FIVE expectations that they want to derive from this session before the starting of the first session of meditation. Students were also asked to read the reference literature on understanding meditation including its requirements before starting the first

session. There on in each class at the beginning of the class, FIVE minutes of the meditation session was conducted. Similarly, the students were engaged in the review of the class activities at the mid and end of the class along with a question-and-answer (QA) session. The review has to be done by random students picked through the ballot and has to make a presentation/lecture of whatever is covered in that particular class followed by question and answer. Peer marking was also done for the review and QA sessions. The overall objectives for initiating these activities were to enhance focus as well as class participation with effective engagement strategies in classroom settings.

Method

This is qualitative research where the primary data is used as the main component of the research findings. The secondary data from the relevant literature are referred to have more insight into the research work.

The primary data for this research is collected from a class of 24 students studying in the final year (7th semester), undergraduate, engineering program. The study is for one of the core engineering subjects that students were taking in the semester. At the beginning of this approach, students were introduced to three innovative approaches planned and were asked to do a prior literature review to understand and list five expectations each for all three innovative approaches.

At the end of the semester, the survey questionnaires were circulated for an individual rating on the three innovative approaches implemented. Each approach was measured through sets of structured questions. The overall evaluation carried out in eight weeks of the class was reported in this research and the result was presented with discussion and the conclusion as derived.

The evaluation received from each student through structured survey questionnaires is presented in the form of graphs and charts for analysis, discussion as well as conclusion.

Results and Discussions

A couple of relevant questionnaires were circulated at the end of the semester to find out the overall outcome that has been achieved from the three approaches incorporated in the classroom.

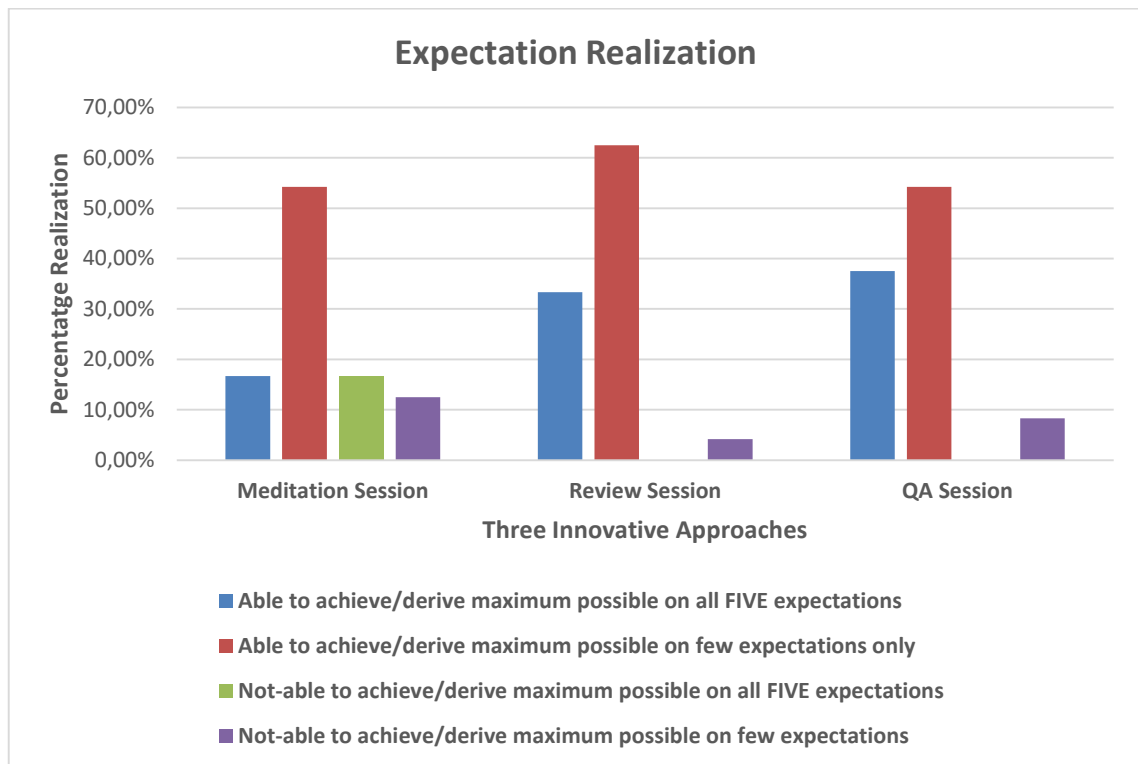


Figure 2. Realizing the FIVE expectations listed before such innovative sessions

Each student has listed their five expectations (i.e., each student with five expectations each for all three innovative approaches) before starting these three innovative approaches in the classroom and later evaluated. The expectations on each innovative approach are kept open so that each student can pen down their expectations against each innovative approach in teaching and learning activities in the classroom. The graphs as shown in figure 2 highlighted that there is a high level of expectation realization for a few of the expectations listed by individuals, followed by the good number of students meeting/deriving maximum expectation in all three innovative approaches.

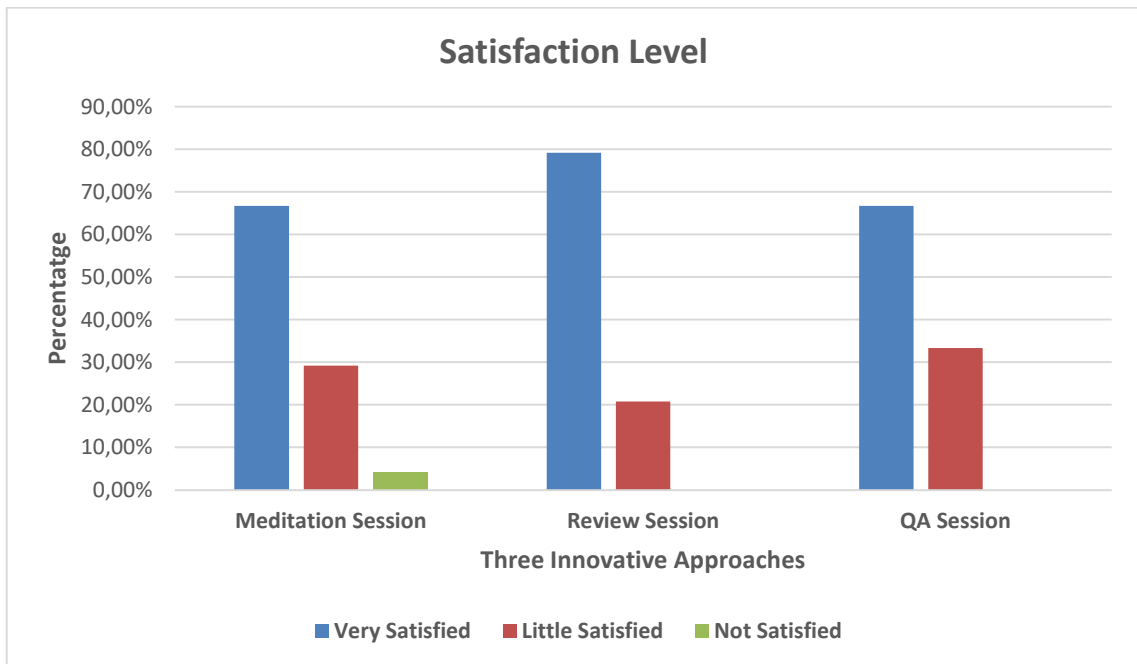


Figure 3. Level of satisfaction from such innovative sessions

Figure 3 above reflects the level of satisfaction each student has derived in each of the innovative approaches that have been incorporated. It is promising to note that a very high level of students is very satisfied with the innovative sessions. There is a minimum number of little satisfied students and almost no one who is not satisfied.

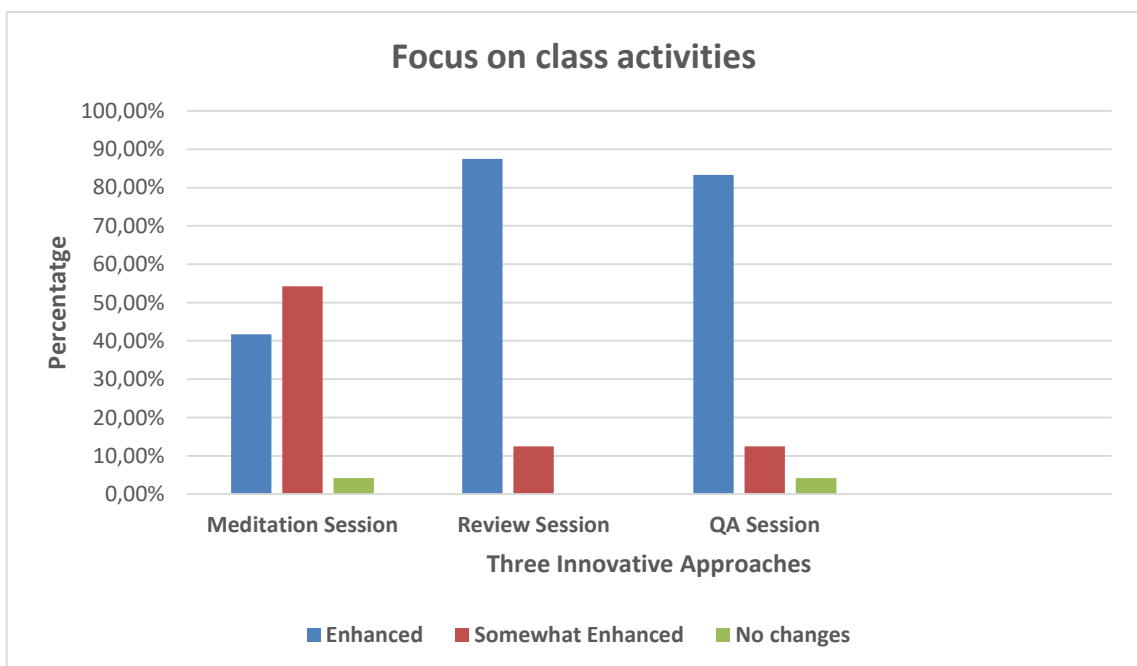


Figure 4. Level of focus enhanced through such innovative sessions

The focus in classroom activities needs to be enhanced so that maximum can be derived from the teaching and learning activities. It is evident from figure 4 above that the approaches like review sessions and QA sessions have substantially enhanced the focus of majorities of the student. Whereas in the case of approaches like meditation, it is somewhat balanced. Overall, the three innovative approaches are seen as impactful in enhancing focus in the class activities.

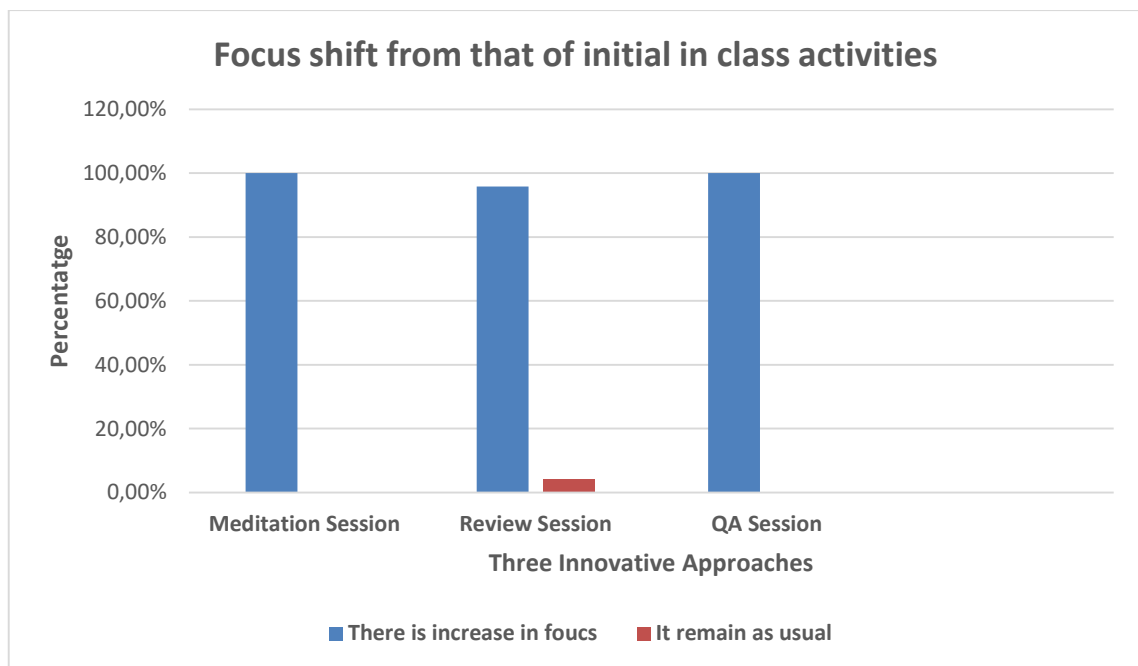


Figure 5. Level of focus enhanced through such innovative sessions

The classroom concentrations and focus have much to do in the grab of class activities. The above figure 5 is a comparison of focus changes that has been noticed after the initiations of the three innovative approaches. Almost all students have rated each of the approaches very high indicating that there is an increase in focus being realized in their class activities when such innovative approaches are incorporated.

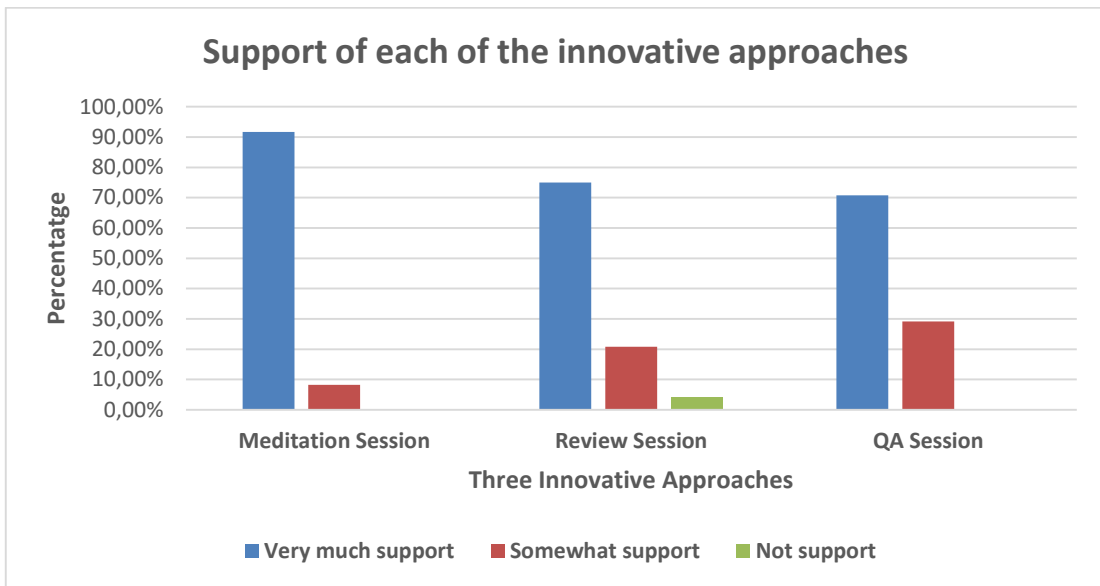


Figure 6. Support of such innovative sessions

The study is also targeted to find out from the experiences of students on supporting such innovative approaches in the classroom. Majorities of students have rated their feeling as shown in figure 6 above to include all such approaches to enhance the classroom activities and their essential grasp.

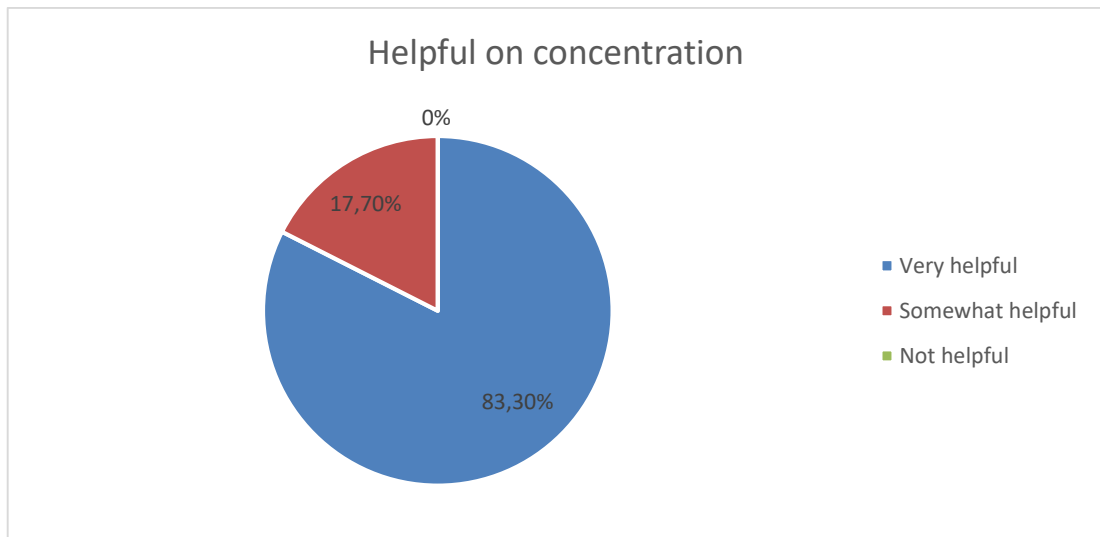


Figure 7. Review and QA sessions helpfulness on concentration in the class activities

Two of the critical approaches incorporated were reviewed in the middle and end of each class where the selected student needs to come in front and do a re-cap of the contents

covered along with peer marking. Le (2021) found out that concentration in the classroom play important role in deriving a maximum grasp of the activities in the class. The session is followed by relevant QA. Such approaches seem to fit well in deriving more concentrations in the classroom activities as reported in above figure 7.

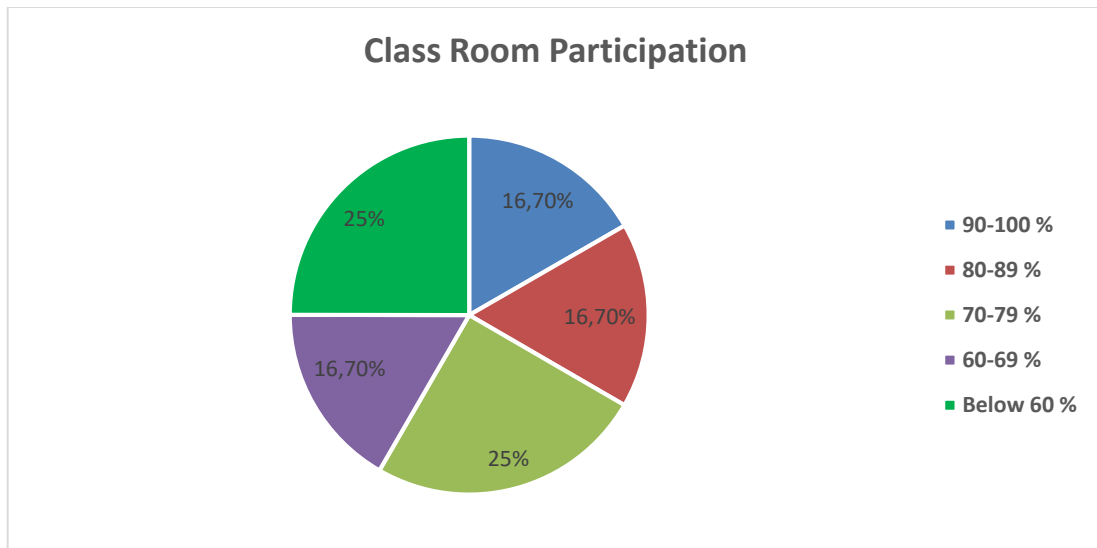


Figure 8. Class participation rating before such innovative activities

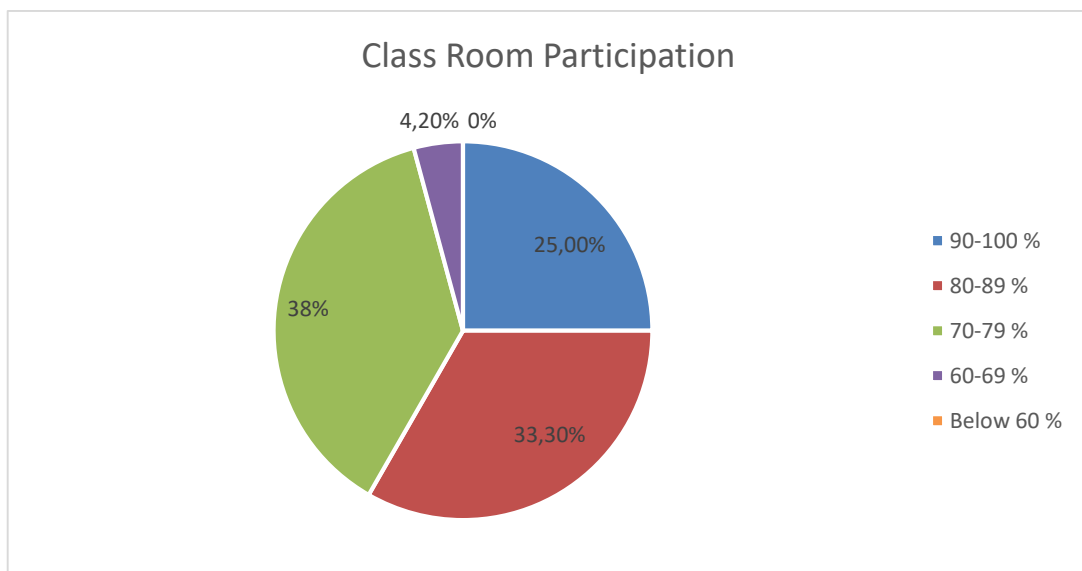


Figure 9. Class participation rating after initiation of such innovative activities

Researchers Boud (1995), Tiew (2010), Bozkurt (2020) in different times have stated that classroom participation and peer engagement are seen as effective measures in teaching

and learning. Finally, the participation level of students was evaluated. Figure 8 highlighted the class participation before the initiation of such innovative approaches and figure 9 is about the participation in the class after the initiation of three critical innovative approaches. Certain changes are being noticed from the result as figured out above. There are no students in concentration level below 60% after initiation of the three innovative approaches whereas before it there were 25% students in this range. Moreover, there is an increase in-class participation in the ranges of 70% and above after incorporating the innovative approaches.

Conclusion and Recommendation

It is observed from the result presented above that the innovative approaches in the form of short meditation session, review session in middle and end of class activities followed by question-and-answer (QA) session has proved to be benefitting student in terms of their concentration, focus, creativity, and understanding. Though the study is restricted to one class of 24 students at the undergraduate engineering program and also limited to half of the semester (i.e. 8 weeks), the overall reflection and satisfaction level shown was encouraging as well as promising. The result also highlighted almost all of them are of an opinion that all the three innovative approaches are worth following in future classes too.

This is a clear indication that the three innovative approaches namely meditation, review, and QA sessions can be well applied in the classroom setting and it has the potential to make teaching and learning more conducive and effective. It is also to appreciate from the finding that such innovative approaches in teaching and learning always inclined the conceptual grasp of the student along with probable increase level of participation with focus and creativity which are always fundamental requirements in academic learning sessions.

Several other engaging activities can further be found out that can increase the level of active participation of students in the class and also make teaching and learning more of participatory approaches. One can very well devise as well as test multiple best-suited approaches which can enhance overall objectives of teaching and learning which are always open for innovation as practices.

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**THE EFFECT OF THE MEMORY EDUCATION PROGRAM PREPARED
WITH COMPUTER ANIMATIONS ON THE MEMORY DEVELOPMENT OF
PRE-SCHOOL CHILDREN**

Dr. Hilal OBALI (Ministry of National Education, TÜRKİYE)

suna.hilal@hotmail.com

ORCID 0000-0002-4156-9872

Prof. Dr. Esra ÖMEROĞLU (Gazi University, TÜRKİYE)

esra.omeroglu@gmail.com

ORCID 0000-0002-8005-7474

Abstract

The main purpose of this research is to examine the effect of the Memory Education Program supported by animations on the phonological, visual-spatial and semantic memory skills of preschool children. The study group consisted of 40 children aged 61-72 months, attending the kindergartens of two primary schools in the same region of the Ministry of National Education in the Etimesgut district of Ankara province in the 2016-2017 academic year. The research was carried out in a pre-test post-test experimental design with a control group, and one of the schools was randomly selected as the experimental group and the other as the control group. The Memory Training Program supported by animations prepared by the researcher was applied to the experimental group two days a week for ten weeks. The data of this research were collected through the General Information Form and the Memory Battery for Preschool Children. The Memory Battery for Preschool Children was administered to the experimental and control groups as a post-test at the end of the ten-week education program. Four weeks after the post-test

application, the battery was re-administered to 20 children in the experimental group to determine whether the training provided was permanent. The distributions of children and families regarding the demographic characteristics are given as frequency and percentage values. Whether there is a difference in the Memory Battery for Preschool Children scores of the children participating in the Memory Education Program at the end of the experiment compared to the children who did not participate in this training; distributions are normal and since the equality of regression slopes for all subtests is provided, ANCOVA has been tested. The t-test for Repeated Measurements was used in the comparison of the post-test and the retention test in the experimental group. The significance level was determined as 0.05. As a result of the findings, it was determined that the Memory Education Program supported by animations had a positive effect on the development of children's phonological, visual-spatial and semantic memory skills, and this effect was permanent.

Keywords: *Preschool, Memory development, Memory education, Computer animation*

Introduction

Memory can be defined as a mental system that holds and stores personal information and controls these mechanisms (Ashcraft, 2002). For this, information is perceived by the sense organs, then processed, recorded and stored in anatomical regions (Mesulam, 2004). Today, it is accepted that memory is not a single piece of mind-specific skill, but one of the basic functions of the mind, consisting of independent processes and systems represented in different places in the brain (Schacter, 2010).

It dates back to Ebbinghaus, who made the first experimental studies on memory. In his studies, he found the forgetting curve by concentrating on the relationship of time with memory, and it was stated that according to this curve, the learning material was forgotten faster in the first few hours following the learning activity and then much slower (Schultz & Schultz, 2002). In 1890, a distinction was made between primary and secondary memory. It was stated that the content in the primary memory is trans-

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ferred to the secondary memory, which contains all the acquired information permanently, and that the secondary memory, unlike the primary memory, can find and retrieve information when necessary (Kilitçi, 2012). In 1949, short-term memory based on the temporary electrical activity of the brain and long-term memory based on neurochemical processes were defined (Baddaley, 2007); In 1968, the multi-store memory model was introduced by Atkinson and Shiffrin by explaining the sensory recording, short-term memory and long-term memory systems (Cangöz, 2005). In 1974, the concept of working memory was proposed, stating that short-term memory does not hold information passively, but processes it (Baddeley, 2003). Then created a hierarchical memory model based on the content of the stored information (Cangöz, 2005). Long-term memory is divided into three systems: episodic memory, semantic memory, and procedural memory. Accordingly, episodic memory includes personal experiences and allows the individual to consciously recall past experiences with time and space information (Tulving, 2002). Semantic memory consists of general information that is not related to a specific time and context and mental concepts that the individual has (Solso, Maclin, & Maclin, 2009). Procedural memory, on the other hand, includes skills and actions that are not consciously aware and cannot be expressed in words (Kilitçi, 2012). In 1985, term memory is classified as explicit and implicit memory. Implicit memory is defined as previous experiences affecting behavior without a conscious and voluntary recollection of them; Explicit memory involves the conscious retrieval of past experiences (Graf & Schacter, 1985).

In this study, phonological and visual spatial memory, which are parts of working memory, will be emphasized. In addition, semantic memory will be emphasized.

Working Memory

The multi-component working memory model was first developed by Baddeley in 1974 (Baddaley, 2002). The working memory center consists of four parts as an executive, phonological loop, visuospatial area and episodic buffer (Baddeley, 2003). Central Administrator; It provides the control, regulation and monitoring of the activities taking place in the phonological loop and visual-spatial area. At the same time, it is

seen as a system that regulates and controls the information entering and leaving the long-term memory, responsible for cognitive functions (Baddeley, 2003). The phonological Loop is based on speech and sound-based knowledge (Baddeley, 2003). Responsible for phonological-based knowledge, speech, short-term recording of verbal material, foreign language learning. Relatedly, it is also responsible for the processing of speech-based inputs and learning new words that are new to the person (Baddeley, Gathercole, & Papagno, 1998). It is also stated to help acquire grammar and learn to read (Baddeley, 2000). Visual Spatial Space; responsible for maintaining and using visual and spatial information (Baddeley, 2003); visuospatial material, visual imagery, short-term recording of visual and spatial material, shapes, movement and image (Baddeley, Gathercole, & Papagno, 1998). In studies on the functioning of visual spatial memory, it has been determined that storage may be primarily spatial, depending on the task type; when the stimulus is presented as motor or kinesthetic or through color and shape, it can be mostly visual (Baddeley, 2003). The working memory model has been reorganized and the episodic buffer concept has been introduced as the fourth component of working memory. The visuospatial field acts as a temporary interface between the phonological loop and long-term memory systems and is responsible for holding information from various sources in coherent chunks (Baddeley, 2000).

Semantic Memory

Semantic memory, which is a part of the hierarchical memory model, is seen as the memory where symbolic information about the world is stored (Tulving, 2002). Semantic memory includes information about facts and long-term memory information about the world, including words, concepts, and grammar. It contains general information about the world that connects concepts and ideas and how to express these concepts and ideas with language (Ashcraft, 2002). Semantic memory requires pre-existing knowledge of words and concepts; forms the basis of performance in tasks such as word identification, lexical decision making, and word completion (Schacter, 2010).

As can be seen, semantic memory contains general information about the world that connects concepts and ideas and how to express these concepts and ideas with

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language (Ashcraft, 2002). It is important to understand its development in children, as working memory is considered the primary step in higher-level cognitive processes such as intelligence, language learning and academic learning (Montgomery, Magimairaj, & Finney, 2010).

Working memory has an important role in supporting children's learning during the school years, as well as their learning in adulthood. The point that the experts who make researches about working memory emphasize is that working memory is necessary to store information while learning activities that require complex skills and knowledge in the classroom are mentally controlled. In such activities, the student who has problems in working memory fails and learning becomes slow and distorted (Alloway, 2006). Children's storage and control of information in short-term memory begin in school years. In studies, it has been determined that children who perform poorly in central executive tasks that require simultaneous storage and processing of information have problems in reading, mathematics and reading comprehension (Leana, 2009). It is also seen that working memory measurements made at the age of four-five before starting school are a good predictor of students' academic achievement (Gathercole, Brown, & Pickering, 2003). The phonological loop, which is an important component of working memory, is important for learning the sound patterns of new words that are necessary to improve vocabulary. Children who have problems with the phonological loop have difficulties in learning new words both in their mother tongue and in foreign language education (Gathercole & Baddeley, 1990). Working memory is also related to complex cognitive behaviors such as understanding, reaching conclusions, and problem-solving (Eangle, 2002). In order to develop working memory, which is responsible for complex cognitive activities such as language processing, visuospatial thinking, reasoning, problem-solving and decision making (Miyake, 2001), it is necessary to organize activities to cover these areas.

In semantic memory, verbal and visual information are tightly linked and stored. Many psychologists also agree that coding information, both visually and verbally, facilitates recall (Yıldız, 2013). Accordingly, coding information by associating information semantically and using phonological and visual inputs together in memory education programs can improve children's memory skills. Research reveals that there is a

difference between remembering a word as a picture, in writing, or by reading it orally. Words presented in pictures or verbally are better remembered than words presented in writing because attention can be focused less on words presented in written form (Foos & Goolkasian, 2005). Accordingly, it is seen that including materials and activities designed to attract children's attention can increase children's memory skills.

From early years, the experiences provided to children with visual and verbal stimuli using various materials can be effective in children's learning by creating memory strategies. Gaining the skills of using strategy in the preschool years, when learning is the fastest, will support the development of the child's thinking skills. The child, who develops a memory strategy by using various visual and verbal materials, will be more successful in becoming an individual who adapts easily to the environment in his future life, makes a better sense of the world he lives in, and fits the definition of a qualified person that society needs (Özyürek, 2009). Memory training programs are important, in which children can consciously receive stimuli from the environment, direct their attention and concentration, store this information in their memory, and recall and use them when necessary (Temel, Kurtulmuş, & Kaynak, 2016). Animations can be used in memory training in terms of being remarkable, suitable for repetition, supporting active learning, and being interactive. It is thought that animations, which have both auditory and visual features by appealing to children's different senses, are useful in structuring the learning process by embodying abstract concepts that preschool children have difficulty in understanding, supporting memory skills such as comprehension, coding and recall. This study, it was aimed to evaluate the effects of the memory education program prepared with computer animations applied to preschool children aged six, on children's phonological, visual-spatial and semantic memory skills.

Method

Working Group

In order to determine the study group, the aiming sampling method and the analogous technique were used. Two different schools located in the same region in the Etimesgut district of Ankara were randomly selected as one control group and one as

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the experimental group. The research was completed with 40 children, 20 in the experimental group and 20 in the control group.

Data Collection Tools

In the study, General Information Form was used to obtain information about the demographic characteristics of the children in the study group and their parents, and the Memory Battery for Preschool Children was used to evaluate their memory skills. Memory Battery for Preschool Children was developed by the researcher; It consists of three subscales. While the first two scales evaluate phonological and visual-spatial memory, which are parts of children's working memory, the third scale evaluates semantic memory. (Obalı, 2018), (Obalı & Ömeroğlu, 2018).

Memory Training Program

During the development of the Memory Training Program, the literature on memory and memory training was examined. The acquisitions and indicators related to memory in 2002, 2006, 2013 Pre-School Education Programs prepared by the Ministry of National Education were scanned and the appropriate ones were taken. Since it was seen that these achievements and indicators were not sufficient for the training program, new achievements and indicators were written by the researcher. The achievements and indicators prepared were presented to the expert opinion. A total of 12 achievements and 47 indicators were created for the Memory Training Program by making adjustments according to the feedback of the experts. After the achievements and indicators were determined, activities were prepared considering the developmental characteristics and individual differences of 60-72 months old children. In the preparation of the activities, the principles from the close to the far environment, from the known to the unknown, from the simple to the complex, from the concrete to the abstract were taken into consideration. In addition, attention was taken to the integration of the activities and to ensure the active-passive balance in the activities. The activities prepared in

the form of games, movement, music, Turkish, drama, art, preparation for literacy, mathematics and science are planned to ensure the active participation of all children. Transitions between activities have been prepared in conjunction to facilitate the transition of children from one activity to another. Methods such as interactive-computerized teaching, question-answer, demonstration and learning by doing were used, and individual, small group and large group studies were carried out. The activities were planned daily as 20 sessions in ten weeks, two days a week. Within the scope of the Memory Training Program, 40 activities were prepared, two per day and four per week. While the activities were being prepared, they were planned as activities to develop phonological, visual, visual-spatial and semantic memory skills. Within the scope of the Memory Training Program; one animation video and one interactive animation application for each week; A total of ten animation videos and ten interactive animation applications were prepared by a computer expert and a researcher. After the activities, animation videos and interactive animation applications were completed, they were presented to the expert opinion, and the Memory Training Program was found suitable for age group and memory education by the experts.

Necessary permissions were obtained before the Memory Training Program was implemented. Memory Battery for Preschool Children was applied to the experimental and control groups as a pre- test. The prepared education program was applied to the experimental group twice a week for ten weeks, and daily education programs were given to the children in the control group by their preschool teachers. In order to improve phonological memory skills, activities were applied to remember from the sound, to find the visual of the object heard, to remember the spoken word, to remember and find the word pair in a whole, to make the sequence of what they heard, to complete the story by remembering what they listened to. Animations and interactive animation applications were made for children to remember what they heard, to find the object that the sound belongs to, to remember the sound, word, word pair and story they heard or heard before. In order to develop visual spatial memory skills, it is necessary to remember the missing or added object, to remember one or a series of objects, to make a sequence of occurrence, to remember the object that was shown and hidden and to find it among other objects, to remember the whole from the piece, to find the object to

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which the pattern or piece belongs, by remembering according to the example. Activities, animations and interactive animation applications were carried out to recreate, remember the details in the picture, find the location of the object shown and hide, and take a position according to the said place. In order to develop semantic memory skills, activities aimed at naming, describing the shown object or picture, counting its features, remembering and finding the missing aspects were applied. To remember the categories of general information; Animations and interactive animation applications were made for naming objects or pictures, counting their features. Memory Battery for Preschool Children was administered to the experimental and control groups as a post-test at the end of the ten-week education program; Four weeks later, the Memory Battery was re-applied to 20 children in the experimental group to determine whether the training provided was permanent.

Data Collection

While collecting the data, the General Information Form was filled by the parents of the children in the study group. The Memory Battery for Preschool Children was administered to the children by the researcher. The data obtained were recorded in the Evaluation Forms.

Analysis of Data

The distribution of the demographic characteristics of children and families is given as frequency and percentage values. In order to determine the appropriate tests to be used in the analysis of the research data, the data were tested for normality. Depending on the effect of the applied memory training, at the end of the experiment, the effectiveness of the program was tested between the experimental and control groups by performing ANCOVA, since the distributions were normal and the equality of regression slopes was provided for all subtests in order to test whether there was a difference compared to the children who did not participate in this training at the end of the experiment. In the experimental group, the t-test was used for repeated measurements

in the comparison of the post-test and the permanence test. The significance level was 0.05.

Results

Results Regarding Demographic Information of Children in Experimental and Control Groups and Their Parents

It was determined that 55% of the children in the experimental group were girls and 45% were boys; It was determined that 40% of the children in the control group were girls and 60% were boys.

It was determined that 45% of the children in the experimental group had no siblings, 30% had one, 15% had two, 5% had three and 5% had four; It was determined that 30% of the children in the control group did not have siblings, 60% had one and 10% had two siblings.

65% of the children in the experimental group were the first, 15% were the second and 20% were the third children; It was determined that 65% of the children in the control group were the first and 35% were the second children.

While 65% of the children in the experimental group were in their first year of pre-school education, 35% of them were in their second year in pre-school education; It was determined that 70% of the children in the control group were in the first year of pre-school education, while 30% were in the second year of pre-school education.

It was determined that 5% of the mothers of the children in the experimental group were primary school graduates, 5% secondary school graduates, 50% high school graduates, and 40% undergraduate degrees; It was determined that 20% of the mothers of the children in the control group were primary school graduates, 20% were secondary school graduates, 25% were high school graduates and 35% were undergraduate graduates.

It was determined that 5% of the fathers of the children in the experimental group were primary school graduates, 5% secondary school graduates, 30% high school

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graduates, and 60% undergraduate degrees; It was determined that 10% of the fathers of the children in the control group were primary school graduates, 15% secondary school, 15% high school graduates, and 60% undergraduate degrees.

Results Related to Pretest-Posttest Scores of Experimental and Control Groups

First, the suitability of the data to the normal distribution was tested. Shapiro-Wilks test is used if the size of the study group is less than 50 and Kolmogorov-Smirnov (K-S) test is used if the scores are large (Büyüköztürk, 2008). Since the group size was less than 50 in this study, the Shapiro-Wilks test was used.

As a result of the analysis, it is seen that the distribution of both the pre- and post-tests of the experimental and control groups did not differ significantly from the normal distribution ($p>.01$). In addition, regression slopes were tested for each subtest. Because before making a comparison between the groups, it should be checked whether the ANCOVA's assumptions "the scores of the groups regarding the dependent variable are normally distributed and the slopes of the regression lines to be used in the estimation of the groups' post-test statistical scores are equal" (Büyüköztürk Ş., 2001). Since the distribution was normal and the regression slopes were equal for each subtest, the analyzes were continued with ANCOVA, one of the parametric analyzes.

Analysis of covariance ANCOVA is a powerful technique that allows comparison between groups by controlling another variable that is related to the independent variable other than the independent variable whose effect is tested in a study (Büyüköztürk Ş., 2001).

ANCOVA Results of Posttest Scores Adjusted for Phonological Memory Scale Pretest Scores According to Experimental-Control Groups

The equality of the regression slopes in the Phonological Memory Scale was tested and then ANCOVA analysis was carried out.

Table 1 - ANCOVA Results of Phonological Memory Scale Nonsense Words Subtest Experiment-Control Groups of Posttest Scores Adjusted According to Pretest Scores

Source of Variance	Squares Total	sd	Squares Average	F	p	η^2
Pre-test	54.97	1	54.97	20.35	0.000	0.35
Group	145.90	1	145.90	54.00	0.000	0.59
Error	99.98	37	2.70			
Adjusted total	300.85	39				

When Table 1 is examined, it was found that there was a significant difference between the post-test scores of the children in the experimental and control groups in terms of the meaningless Words Subtest scores, according to the ANCOVA results in which the pretest scores were taken as the covariate ($F(1,37)=54.00$, $p < 0.05$; $\eta^2=0.59$). Accordingly, it is seen that the training provided is effective.

ANCOVA Results of Posttest Scores Adjusted for Visual Spatial Memory Scale Pretest Scores According to Experiment-Control Groups

The equality of the regression slopes for the Black and White Matrices, Colored Matrices and Shaped Matrices Subtests in the Visual Spatial Memory Scale were tested separately, and then ANCOVA analyzes were started.

Table 2 - ANCOVA Results of Posttest Scores Adjusted for Pretest Scores for Visual Spatial Memory Scale Black and White Matrices Subtest by Experiment-Control Groups

Source of Variance	Squares Total	sd	Squares Average	F	p	η^2
Pre-test	2857.38	1	2857.38	47.16	0.00	0.56
Group	1306.69	1	1306.69	21.57	0.00	0.36

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Error	2241.62	37	60.58
Adjusted total	6405.69	39	

When Table 2 is examined, it was found that there was a significant difference between the posttest scores of the children in the experimental and control groups in terms of Visual Spatial Memory Black and White Matrices Subtest scores, according to the ANCOVA results in which the pretest scores were taken as the common variable ($F(1, 37)=21, 57, p<0.05; \eta^2=0.37$). In this case, it is seen that the training provided is effective.

Table 3 - ANCOVA Results of Posttest Scores Adjusted for Pretest Scores of Visual Spatial Memory Scale Colored Matrices Subtest by Experiment-Control Groups

Source of Variance	Squares Total	sd	Squares Average	F	p	η^2
Pre-test	2723.86	1	2723.86	28.68	0.00	0.43
Group	1670.91	1	1670.91	17.59	0.00	0.32
Error	3514.09	37	94.98			
Adjusted total	7908.86	39				

When Table 3 is examined, it was found that there was a significant difference between the posttest scores of the children in the experimental and control groups in terms of Visual Spatial Memory Colored Matrices Subtest scores, according to the ANCOVA results in which the pretest scores were taken as the common variable ($F(1, 37)=17.59, p<0.05; \eta^2=0.32$). In this case, it is seen that the training provided is effective.

Table 4 - ANCOVA Results of Visual Spatial Memory Scale Shaped Matrices Subtest of Posttest Scores Adjusted According to Pretest Scores According to Experimental-Control Groups

Source of Variance	Squares Total	sd	Squares Average	F	p	η^2
Pre-test	3262.67	1	3262.67	44.89	0.00	0.54

Group	2303.06	1	2303.06	31.69	0.00	0.46
Error	2689.23	37	72.68			
Adjusted total	8254.96	39				

When Table 4 is examined, it was found that there was a significant difference between the post-test scores of the children in the experimental and control groups in terms of Visual Spatial Memory Shaped Matrices Subtest scores, according to the ANCOVA results in which the pre-test scores were taken as the common variable ($F(1, 37)=31.69, p<0.05; \eta^2=0.46$). In this case, it is seen that the training provided is effective.

ANCOVA Results of Posttest Scores Adjusted for Semantic Memory Scale Pretest Scores According to Experimental-Control Groups

Equality of regression slopes for Word List Creation, Picture Naming, Word Description and Word Picture Matching Subtests in Semantic Memory Scale was tested separately and then ANCOVA analysis was carried out.

Table 5 - ANCOVA Results of Semantic Memory Scale Word List Creation Subtest According to Experiment-Control Groups of Posttest Scores Adjusted According to Pretest Scores

Source of Variance	Squares Total	sd	Squares Average	F	p	η^2
Pre-test	342.37	1	342.37	16.13	0.00	0.30
Group	1288.82	1	1288.82	60.71	0.00	0.62
Error	785.43	37	21.23			
Adjusted total	2416.62	39				

When Table 5 is examined, it was found that there was a significant difference between the post-test scores of the children in the experimental and control groups in terms of the Semantic Memory Scale Word List Creation Subtest scores, according to the ANCOVA results in which the pretest scores were taken as the common variable ($F(1, 37)=60, 71, p<0.05; \eta^2=0.62$). In this case, it is seen that the training provided is effective.

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Table 6 - ANCOVA Results of Semantic Memory Scale Picture Naming Subtest Posttest Scores Adjusted According to Pretest Scores According to Experiment-Control Group

Source of Variance	Squares Total	sd	Squares Average	F	p	η^2
Pre-test	152.23	1	152.23	27.14	0.00	0.42
Group	125.50	1	125.50	22.38	0.00	0.37
Error	207.52	37	5.61			
Adjusted total	485.25	39				

When Table 6 is examined, it was found that there was a significant difference between the post-test scores of the children in the experimental and control groups in terms of the Semantic Memory Section Picture Naming Subtest scores, according to the ANCOVA results in which the pre-test scores were taken as the common variable ($F(1, 37)=22.38$, $p<0.05$; $\eta^2=0.37$). In this case, it is seen that the training provided is effective.

Table 7 - ANCOVA Results of Posttest Scores Adjusted for Semantic Memory Section Word Description Subtest Pretest Scores According to Experiment-Control Groups

Source of Variance	Squares Total	sd	Squares Average	F	p	η^2
Pre-test	641.51	1	641.51	28.75	0.00	0.43
Group	2757.91	1	2757.91	123.61	0.00	0.77
Error	825.49	37	22.31			
Adjusted total	4224.91	39				

When Table 7 is examined, it was found that there was a significant difference between the post-test scores of the children in the experimental and control groups in terms of the Semantic Memory Scale Word Description Subtest scores, according to the ANCOVA results in which the pre-test scores were taken as the common variable ($F(1, 37)=123.61$, $p<0.05$; $\eta^2=0.77$). In this case, it is seen that the training provided is effective.

Table 8 - Semantic Memory Section Word Picture Matching Subtest ANCOVA Results of Posttest Scores Adjusted According to Pretest Scores According to Experimental-Control Groups

Source of Variance	Squares Total	sd	Squares Average	F	p	η^2
Pre-test	6.60	1	6.60	9.33	0.00	0.20
Group	3.35	1	3.35	4.75	0.03	0.77
Error	26.15	37	0.71			
Adjusted total	36.10	39				

When Table 8 is examined, it was found that there was a significant difference between the posttest scores of the children in the experimental and control groups in terms of the Semantic Memory Scale Word Picture Matching Subtest scores, according to the ANCOVA results in which the pretest scores were taken as the common variable ($F(1, 37)=4,75, p<0.05; \eta^2=0.11$). In this case, it is seen that the training provided is effective.

Results Concerning the Permanence Test Scores of the Children in the Experimental Group

In the experimental group, the t-test was used for repeated measurements in the comparison of the post- test and the permanence test. The t-test is used to test whether there is a significant difference between the mean scores of the two groups (Büyükoztürk Ş. , 2001). 0.05 was used as the level of significance, and it was stated that there was a significant difference in the case of $p<0.05$, and there was no significant difference in the case of $p>0.05$.

T-Test Results of the Children in the Phonological Memory Scale Experimental Group Regarding the Difference Between Posttest and Permanence Test

Table 9 - Phonological Memory Scale Nonsense Words Subtest Experimental Group Children's t-Test Results Regarding the Difference Between Posttest and Permanence Test

Tests	Application	N	Average	SS	St. Error of Average	t	sd	p
Non-sense Words	Post	20	18.00	1.86	.41			
	Permanence	20	18.00	2.10	.47			

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0.00 19 1.0

Table 9 shows that the post-test mean score of the children in the experimental group for the Phonological Memory Scale Nonsense Words Subtest was $\bar{X}=18$ and the mean of permanence practice was equal to $\bar{X}=18$, and the scores were ($t=0.00$), ($p>0.05$). there appears to be no difference. When the posttest and permanence test findings of the experimental group are compared, it can be said that the permanence of the Memory Training Program continues.

Visual Spatial Memory Scale Experimental Group Children's t-Test Results Regarding the Difference Between Posttest and Permanence Test

Table 10 - Visual Spatial Memory Scale Black and White Matrices Subtest Experimental Group Children's t-Test Results Regarding the Difference Between Posttest and Permanence Test

Tests	Application	N	Average	SS	St. Error of Avg.	t	sd	p
Non-sense Words	Post	20	59.90	9.68	2.16	0.00	19	0.76
	Permanence	20	60.45	11.25	2.516			

In Table 10, the post-test mean scores of the children in the experimental group for the Visual Spatial Memory Scale Black and White Matrices Subtest are between $\bar{X}=59.9$ and the permanence application averages between $\bar{X}=60.4$ ($t=-0.30$), ($p>0.05$) it is seen that there is no significant difference. When the posttest and permanence test findings of the experimental group are compared, it can be said that the permanence of the Memory Training Program continues.

Table 11- Visual Spatial Memory Scale Colored Matrices Subtest Experimental Group Children's t-Test Results Regarding the Difference Between Posttest and Permanence Test

Tests	Application	N	Average	SS	St. Error of Average	t	sd	p
Colored Matrices	Post	20	55.30	9.03	2.01	-1.55	19	0.13
	Permanence	20	57.40	10.89	2.43			

In Table 11, the post-test mean scores of the children in the experimental group for the Visual Spatial Memory Scale Colored Matrices Subtest are between $X=55.3$ and the permanence application averages of $X=57.4$ ($t=-1.5$), ($p>0, .05$) it is seen that there is no significant difference. When the posttest and permanence test findings of the experimental group are compared, it can be said that the permanence of the Memory Training Program continues.

Table 12 - Visual Spatial Memory Scale Shaped Matrices Subtest Experimental Group Children's t-Test Results Regarding the Difference Between Posttest and Permanence Test

Tests	Application	N	Average	SS	St. Error of Average	t	sd	p
Shaped Matrices	Post	20	53.55	9.25	2.07			
	Permanence	20	55.95	11.33	2.53	-1.44	19	0.16

In Table 12, the post-test mean scores of the children in the experimental group for the Visual Spatial Memory Scale Shaped Matrices Subtest are between $X=53.5$ and the permanence practice averages $X=55.9$ ($t=-1.44$), ($p>0, .05$) it is seen that there is no significant difference. When the posttest and permanence test findings of the experimental group are compared, it can be said that the permanence of the Memory Training Program continues.

The t-Test Results of the Semantic Memory Scale Experimental Group Children on the Difference Between Posttest and Permanence Test

Table 13 - Semantic Memory Scale Word List Creation Subtest Experimental Group Children's t-Test Results Regarding the Difference Between Posttest and Permanence Test

Tests	Application	N	Average	SS	St. Error of Average	t	sd	p
Word List	Post	20	29.50	5.20	1.16			
	Permanence	20	32.20	8.05	1.80	-1.94	19	0.06

In Table 13, the post-test mean scores of the children in the experimental group for the Semantic Memory Scale Word List Creation Subtest are between $X=29.5$ and the permanence practice averages of $X=32.2$ ($t=-1.94$), ($p>0, .05$) it is seen that there is no

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significant difference. When the posttest and permanence test findings of the experimental group are compared, it can be said that the permanence of the Memory Training Program continues.

Table 14 - Semantic Memory Scale Picture Naming Subtest Experimental Group Children's t-Test Results Regarding the Difference Between Posttest and Permanence Test

Tests	Application	N	Average	SS	St. Error of Average	t	sd	p
Picture Naming	Post	20	18.15	3.32	.74	0.80	19	0.43
	Permanence	20	17.55	4.14	.92			

In Table 14, the post-test mean scores of the children in the experimental group for the Semantic Memory Scale Picture Naming Subtest are between $X=18.15$ and the permanence practice average of $X=17.5$ ($t=0.80$), ($p>0.05$). there appears to be no significant difference. When the posttest and permanence test findings of the experimental group are compared, it can be said that the permanence of the Memory Training Program continues.

Table 15 - Semantic Memory Scale Word Explanation Subtest Experimental Group Children's t-Test Results Regarding the Difference Between Posttest and Permanence Test

Tests	Application	N	Average	SS	St. Error of Average	t	sd	p
Describing Word	Post	20	38.70	7.34	1.64	-0.40	19	0.68
	Permanence	20	39.30	10.17	2.27			

In Table 15, the post-test mean scores of the children in the experimental group for the Semantic Memory Scale Word Description Subtest ranged from $X=38.7$ to X permanence= 39.3 ($t=-0.40$), ($p>0.05$).) does not appear to be a significant difference. When the posttest and permanence test findings of the experimental group are compared, it can be said that the permanence of the Memory Training Program continues.

Table 16 - Semantic Memory Scale Word Picture Matching Subtest Experimental Group Children's t-Test Results Regarding the Difference Between Posttest and Permanence Test

Tests	Application	N	Average	SS	St. Error of Average	t	sd	p
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Word	Post	20	4.85	.933	.20			
Picture								
Match-	Permanence	20	4.75	1.26	.28			
ing						-0.43	19	0.66

In Table 16, the post-test mean scores of the children in the experimental group for the Semantic Memory Scale Word Picture Matching Subtest were between $X=4.85$ and the permanence practice average between $X=4.75$ ($t=0.438$), ($p>0.05$). there appears to be no difference. When the posttest and permanence test findings of the experimental group are compared, it can be said that the permanence of the Memory Training Program continues.

Discussion and Conclusion

In this study, which was conducted to examine the effect of the Memory Education Program supported by animations on the phonological, visual-spatial and semantic memory skills of preschool children, an experimental design with experimental and control groups was used. The Memory Battery for Preschool Children developed by the researcher was used as a measurement tool, and the scores of both groups were found to be close to each other according to the results of the pre-tests applied to the experimental and control groups. The Memory Training Program was applied to the experimental group two days a week for ten weeks. The education program is aimed to develop phonological and visual-spatial memory skills and semantic memory skills, which are parts of children's working memory. At the end of the training, the Memory Battery for Preschool Children was applied as a post-test in the experimental and control groups. Four weeks after the post-test application, the battery was re-administered to 20 children in the experimental group to determine whether the training provided was permanent.

Although the groups were close to each other according to the pre-test results at the beginning of the study, a significant increase was observed in the scores of the experimental group after the application of the memory training program supported by the animations.

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When the findings for the Phonological Memory Scale were examined, it was found that the memory training given with animations in the Memory Education Program was effective in the development of children's phonological memory. Accordingly, it can be said that doing preschool activities with applications such as animation, using technology and computer software to help children remember words and word pairs, supporting verbal communication, contribute to the development of children's phonological memory. Looking at the results of the studies in the literature, phonological working memory was found to be significantly related to vocabulary (Hoff, Core, & Bridges, 2008). In addition, it has been seen that communicating with oral language, using hearing aid technology effectively, and receiving early family or preschool education support phonological working memory performance (Doğan, 2011). Studies have shown that working memory pieces of training cause changes in brain activities, that is, the increase in prefrontal and parietal activity after working memory training affects the nervous systems underlying working memory; children's performance in working memory task improved significantly with training (Olesen, Westerberg, & Klingerg, 2004), (Loosli, Buschkuehl, Perrig, & Jaeggi, 2012); It also shows that the training given using computer software is effective (Segers & Verhoeven, 2002). It can be said that these results support the result in the study that children's phonological memory skills can be improved with training.

When the results for the Visual Spatial Memory Scale were examined, it was found that the memory training given with animations in the Memory Training Program was effective in the visual spatial memory development of children. The Memory Training Program supported by animations, activities, animation videos and interactive animation applications were made with children to improve their visual-spatial memory skills. In these activities and animations, by enabling children to remember the object, entity or picture they see, their color, place and shape; At the same time, visual spatial memory skills were developed by using memory strategies such as coding and grouping. At the end of the training, it was observed that the post-test scores of the children in the experimental group increased significantly compared to the post-test scores of the children in the control group in all of the Visual Spatial Memory Scale, Black and White Matrices, Colored Matrices and Shaped Matrices Subtests. When the research

results in the literature are examined; shows that training covering mental abilities is related to working memory capacity, the increase in memory capacity is not only defined by biological or hereditary factors, but also depends on experiences and training (Lee, Lu, & Ko, 2007). In addition, it was found that the successful use of semantic grouping strategy (Scheleepen & Jonkman, 2012), descriptions and explanations positively affect visual spatial memory (Vales & Smith, 2015). Working memory training has significantly improved children's working memory skills, which are an important predictor of school success (Kroesbergen, Noordende, & Kolkman, 2014); the visual retention memory of educated children develops; It is possible to see that the visual-spatial areas of the educated students are more effective than the uneducated students (Altıparmak, 2016). In addition, animation films and interactive applications have a positive effect on the visual perception development of 60-72-month-old children, and materials prepared to teach concepts with the help of animation are suitable for preschool children (Yücelyiğit, 2014); It has been emphasized that preschool children who are educated with animation are more successful than the other group in gaining concepts (Gürbulak, 2013). It can be said that these results support the finding that children's visual-spatial memory skills can be improved with education.

When the results for the Semantic Memory Scale were examined, it was found that the memory training given with animations in the Memory Training Program was effective in the semantic memory development of children. The Memory Training Program supported by animations, activities, animation videos and interactive animation applications were made with children to improve their semantic memory skills. In these activities and animations, semantic categories were scripted for children and activities were carried out, and semantic memory was supported with phonological and visual codes. When the research results in the literature are examined, it is seen that the cognitive development training program has a positive and significant effect on the attention, perception and memory development of children (Temel, Kurtulmuş, & Kaynak, 2016); depending on the memory training given, free recall is based on semantic codes (Melby-lervag & Hulma, 2010); It is seen that it is important to support the education of preschool children with software and applications suitable for their developmental characteristics (Çakıroğlu & Taşkın, 2016). It can be said that these results support the finding that children's semantic memory skills can be improved with education.

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When the post-test scores of the experimental group and the follow-up test scores for permanence are examined, it is seen that there is no significant difference ($p>0.05$) between the post- test mean scores of the children in the experimental group and the permanence application mean scores in all subscales. According to these findings, the phonological, visual-spatial and semantic memory skills of the experimental group children developed at the end of the education; It can be said that the Permanence of the Memory Training Program continues in Phonological Memory Scale, Visual Spatial Memory Scale Black and White Matrices, Colored Matrices and Shaped Matrices, Semantic Memory Scale Word List Creation, Picture Naming, Word Description and Word Picture Matching Subtests. When the research results in the literature are examined, regardless of gender and educational status of parents, the applied memory training program has a positive effect on the memory development of children (Özyürek, 2009); compared learning, delayed recognition, visual and verbal short-term and long-term memory, general memory index scores of the same children at the age of six and eight. As a result; It was determined that the experimental group's deferred recognition, visual and verbal short- term and long-term memory, general memory indexes follow-up test scores were higher than the same score of the control group (Özyürek, 2013). In addition, the experimental group supported by computer games was more successful in the posttests, and it was observed that permanence was achieved according to the results of the permanence test applied five weeks after the implementation of the posttests of the experimental study (Çankaya, 2012). When the results of the research were examined, it was seen that the use of animation in education in the pre-school education period increased the permanence and the positive effects of the applied memory training program on the memory development of children continued. As a result, when the results of the studies in the literature are examined, it can be said that this study coincides with the findings.

Suggestions

- Different memory training programs can be developed to help children increase their memory skills.
- By applying memory training with gifted or special needs children, the effect of these children on their memory skills can be examined.

- In family education studies, parents can be provided with information about memory development, and by providing activities, games, practices and suggestions to improve memory skills, families can support memory development.
- The knowledge and experience of educators on how to better support memory skills in children can be increased through in-service training activities.
- Activities and programs that increase the memory skills and capacity of children can be included more in the daily flow.

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**INCREASING TEACHER CANDIDATES COGNITIVE LEARNING
THROUGH INCREASING INSTRUCTOR'S TEACHING IMMEDIACY****Prof. Dr. Hüseyin KOTAMAN** (Harran University, TURKIYE)huskotman@hotmail.com.

Orchid: 0000-0002-6727-3308

Abstract

The purpose of the study is to investigate the impacts of two teacher immediacy methods on students' immediate and long-term evaluation of teacher immediacy, state of motivation and cognitive learning. The first method is to memorize students' names in the first lecture and start calling them by their names at the end of it and the second method is to welcome students at the entrance of the classroom by their names. Throughout the semester, the teacher met the students at the entrance of the classroom before lectures and welcomed each student by his or her name. At the end of the semester, the students responded to the scales and sat the test again. The results revealed that the first method significantly increased teacher immediacy. The posttest results revealed that teacher immediacy directly and state motivation through teacher immediacy significantly affected cognitive learning.

Key Words: *Memorizing students' names, welcoming students before lectures, teacher immediacy, state motivation, cognitive learning.*

Introduction

Beside deep content knowledge and knowledge of effective instruction, effective teachers should be able to build effective personal communication with their students

(Frymeir, & Houser, 2000). The type, content and quality of this communication would affect the quality of education. This relationship is conceptualized as immediacy by Mehrabian (1969). Immediacy is defined as a set of behaviors creating a perception of physical or psychological closeness between communicators (Mehrabian, 1969). Teacher immediacy can be defined as teachers' verbal actions such as calling students by their names, asking students about themselves, asking for students' opinions and non-verbal actions such as moving about the class during class, using facial expressions, gestures, and voice effectively, smiling, and establishing eye contact. This study recruited two methods to increase teacher immediacy, therefore, the study consisted of two phases. The first phase involved the allocation of the first lecture for an acquaintance meeting for the treatment group. At the end of the lecture, the teacher memorized the students' names and called each student by his or her name. The impact of this application on the students' teacher immediacy evaluation and state motivation was assessed. The second phase lasted through the whole semester. Each week, the teacher met the treatment group at the entrance of the classroom and welcomed them to the class by their names before the lecture. At the end of the semester, both groups' evaluations of teacher immediacy, course (state) motivation and academic achievement (academic learning) were compared. Thus, the purpose of the study is to investigate the impact of these applications on teacher immediacy, students' state motivation for the course and cognitive learning.

First Impression and Teacher Immediacy

The study of Ambady and Rosenthal (1993) highlighted the importance of first impression for teachers. They have found that seeing teachers in a 30-second videotape is enough for students to generate a judgment on their teacher's effectiveness. A recent study has revealed that students find teachers with a good first impression more confident, dominant, likable and professional compared to teachers with a bad first impression (Samudra, Min, Cortina & Miller, 2016). These studies have revealed the importance of the first impression. For a good first impression, they focused on teachers' behaviors such as a strong and positive tone of voice, enthusiastic and relevant gestures and facial expressions. Besides these, we assume that teachers' demonstration of personal interest to students such as trying to learn their names at the first lecture can also create a good first impression and increase students' evaluations of teacher immediacy. To the author's

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knowledge, such an attempt demonstrated by a teacher has not been studied with an experimental design. Therefore, the study may serve as an enrichment of teachers' behavioral repertoire for creating a good first impression and, thus, increase teacher immediacy.

Teacher Immediacy and Motivation

Teacher immediacy would be one of the aspects that can increase students' motivational tendencies (Christophel, 1990; Frymeir and Houser 2000). Christophel (1990) stated that "it was believed that students would be motivated to move towards (approach) classes they like and unmotivated or move away from (avoid) classes they dislike" (Christophel, 1990, p. 325). Accordingly, Frymier and Houser (2000) have stressed that teachers recruit interpersonal communication methods to motivate their students. Establishing a good rapport with students could positively affect students' motivation for the course and learning.

In many ways, teacher immediacy is related to and sometimes overlaps with teacher enthusiasm (Keller, Goetz, Woolfolk Hoy, & Frenzel, 2016). Several studies have revealed the positive impact of teacher enthusiasm on students' intrinsic motivation, recall performance (Moè, 2016), higher quality of teaching (Kunter, Frenzel, Nagy, Baumert, & Pekrun, 2011). Since teacher enthusiasm and teacher immediacy are related concepts, a display of teacher immediacy may be perceived as a sign of teacher enthusiasm and intrinsic motivation. Therefore, it may positively affect students' motivation and cognitive development (Keller, Goetz, Woolfolk Hoy, & Frenzel, 2016). These claims are reasonable under the theorization of self-determination theory (STD).

Self-determination points out that people are intrinsically motivated to learn and improve (Deci & Ryan, 2000). The acts of teacher immediacy can be seen as signs of intrinsic motivation because they resemble the eagerness of a teacher to be in class. Therefore, teacher immediacy may be related to state motivation, too.

Brophy (1983) defined state motivation as "students' purposeful engagement in classroom tasks by trying to master the concepts or skills involved (p. 200)." Comadena, Hunt and Simonds (2007) have found that non-verbal teacher immediacy increases students' state motivation and students' affective evaluations of the course and the instructor. In another study, Zhang and Oetzel (2006) reached similar findings with Chinese students. They have found that teacher immediacy increases students' state motivation and,

in return, state motivation works as a mediator between immediacy and cognitive learning.

Consequently, increasing state motivation may positively affect cognitive learning. Zhang and Oetzel (2006) investigated the path between teacher immediacy, students' learning motivation and cognitive learning. They have stated that "teacher immediacy first increases students' effect for the course and the instructor, affect then motivates students to learn; motivation finally leads to increased cognitive learning (p. 326)." Therefore, the study investigated the impact of instructor's applications (memorizing students' names at the first lecture and welcoming students throughout the semester) on students' state motivation. Thus, the interaction of state motivation, teacher immediacy and cognitive learning was also investigated.

Teacher Immediacy and Cognitive Learning

Several studies have revealed a positive correlation between verbal and nonverbal teacher immediacy and affective (Chesebro 2003; McCluskey, Dwyer, & Sherrod 2017), perceived (King & Witt 2009) and cognitive learning (Witt, Wheelless & Allen, 2004). Cognitive learning can be defined as recalling, recognizing and understanding the course content (Huges, 20014). Limited experimental studies are investigating the impact of teacher immediacy on cognitive learning that recruits recall or/and conceptual tests to measure cognitive learning (Witt & Wheelless 2001). These studies revealed mixed results on the issue.

In their experimental study, Witt & Wheelless (2001) examined the impact of teachers' verbal and nonverbal immediacy on students' affective and cognitive learning. The students were randomly assigned to a control group and four experimental groups. In each condition, a guest lecturer that performed on videotape exhibited different verbal and nonverbal immediacy behaviors. The students assessed the guest instructor's short videotape lecture. The students' cognitive learning was measured with a 31-item recall test. Their findings revealed that higher nonverbal immediacy by the teacher produced greater recall, less learning loss, and greater effect than lower nonverbal immediacy. In two consecutive meta-analyses, the impact of nonverbal and verbal teacher immediacy on students' perceived, affective and cognitive learning was documented (Witt, Wheelless & Allen, 2004; Allen, Witt, & Wheelless 2006). Although these studies emphasized the

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positive impact of teacher immediacy on students' cognitive learning, some studies reached different findings (Gorham, Cohen, & Morris, 1997; King and Witt, 2009).

Gorham, Cohen and Morris (1997) investigated the impact of instructor immediacy and attire on students' cognitive learning. They could not detect a significant impact of instructor immediacy on students' cognitive learning that was measured by student performances on the quiz items following the lectures. In a more recent study, King and Witt (2009) could not find a significant relationship between perceived teacher immediacy and students' final course grades. Therefore, the impact of teacher immediacy is still a debatable issue. The current study examines the effects of teacher immediacy on students' cognitive outcomes which are measured through standardized test items. Thus, the study aims to reach longitudinal experimental findings on the effects of new methods that would increase teacher immediacy.

Importance and Purpose of the Study

To the author's knowledge, this is the first experimental study recruiting two methods to increase teacher immediacy (creating a positive first impression through memorizing students' names). The experimental studies conducted in authentic classroom environments which investigate the direct and indirect (through state motivation) impact of teacher immediacy on cognitive learning are rare. Also, the experimental studies on teacher immediacy recruited posttest-only design, and this study is pretest-posttest design. Thus, it would enhance our understanding of the impact of teacher immediacy on state motivation and cognitive learning. Except for Gorham, Cohen and Morris (1997), all the above-mentioned studies tested the impact of teacher immediacy on one-session short videotape (15-20 min) instructions with guest instructors. Gorham, Cohen and Morris (1997) also recruited a similar approach without live instructions. The current study targets these gaps and aims to contribute to the field by providing information on the long-term authentic functional value of teacher immediacy for learning.

The study was conducted in a non-western country. Turkey is placed in the middle of the east and the west; therefore, it holds cultural values that are compatible with both cultures (Geçer & Gümüş, 2010). Geçer and Gümüş (2010) emphasized that, in terms of collectivism, Turkish culture is similar to Japanese and Chinese cultures. However, global

economic, political and cultural factors caused prominent changes in its social structure and values. Therefore, Turkey is in a transition phase in which the traditional authoritarian approach used in Turkish schools is replaced with more democratic approaches (Geçer & Gümüş, 2010). Our study recruited religion teacher candidates from the south-east region of Turkey where feudal values such as obedience to higher authorities and expecting teachers as a higher authority are more widely accepted compared to the western side of Turkey. Therefore, the findings of the study would contribute to the universality of the effect of teacher immediacy.

The purpose of the study is to investigate the impacts of two teacher immediacy methods, the first of which is to memorize students' names in the first lecture and start calling their names at the end of the first lecture and the second of which is to meet students at the entrance of the classroom and welcome them by calling their names on students' immediate and long-term evaluations of teacher immediacy, state motivation and cognitive learning. Accordingly, the null hypotheses of the study are a) allocating the first lecture for an acquaintance meeting and memorizing students' names will not affect students' evaluations of teacher immediacy and state motivation and, therefore, academic achievement. b) Meeting students at the entrance of the classroom and welcoming them by calling their names throughout the semester will not affect students' evaluations of teacher immediacy, state motivation and, therefore, cognitive learning performance.

Participants

The study was conducted with religion education teacher candidates who were second-grade university students. There are daytime and evening education classes in the religion teacher education department, which provides an opportunity for pretest-posttest experimental design with a control group. The evening group was randomly determined as the treatment group. There were 50 and 39 teacher candidates in the control and treatment groups respectively. Of the 39 participants in the treatment group, two were male and the rest was female; mean age 21. All of the control group participants were female; mean age 20.54.

Procedures

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The study was conducted in an educational psychology course in the 2018 spring semester. For the treatment group, the instructor used the first lecture for acquaintance. He gave the following instruction: "Teaching is a human process which involves mutual interaction and communication. Therefore, I want to know your names. Please introduce yourself to me. Please try to come up with a creative introduction that would enable me to remember your name." After the instruction, teacher candidates introduced themselves. Then, the instructor provided the following explanation: "In time, I will try to learn your names. Now, I will try to see how many of your names I can remember. If I cannot remember your names, please do not take it personally." He called the teacher candidates' names and recalled all the names but six. Then, he provided another explanation: "I am researching motivation and teacher immediacy. If you want to participate in the study, I will ask you to respond to questionnaires about motivation, teacher immediacy and a test on educational psychology. The test on educational psychology is composed of questions of the central officer election test. If you respond to all questionnaires now and at the end of the semester, you will receive extra 5 points for your final examination. You do not have to write your names. In the questionnaires, some items are questioning your experiences such as 'My instructor trusts me and makes me feel that trust.' When you respond to such items, please provide your estimation about the future such as 'I believe the instructor will trust me and make me feel that trust' in your responses." The instructor greeted each teacher candidate at the classroom's door one by one by calling their names and saying "Welcome! How are you?" thorough 13 weeks. He actively showed an effort to learn the name of each teacher candidate in the treatment group by asking their names if he couldn't recall at that moment. According to Islam, women cannot shake hands with men. Therefore, he did not attempt to shake hands with teacher candidates. However, he did shake hands when some male students wanted to shake hands during the greeting.

For the control group, the instructor did not arrange an acquaintance lecture and he did not call teacher candidates' names one by one. He provided the same instructions with the treatment group. During the semester, he didn't greet the control group at the classroom door or attempt to learn the teacher candidates' names. However, at the end of each lecture, he learned some of the teacher candidates' names and called those by their names.

Measures

Test for Educational Psychology: Since 2003, teacher candidates have to pass the Examination for Selecting Government Officers (ESGO) in Turkey. ESGO is a central examination, with 80 educational sciences questions, 22-24 of educational psychology. The investigator randomly selected five educational psychology questions from six previous ESGO and created a 30-question test for educational psychology.

Teacher Immediacy Behavior Scale: The participants responded to the Teacher Immediacy Behavior Scale for Higher Education (TIBS) that was developed by Geçer and Deryakulu (2004). The TIBS is a reliable and valid instrument containing 48 items that determine verbal (e.g. Teacher calls me with my name) and nonverbal (e.g. Teacher smiles to class while he/she is lecturing) teacher immediacy behaviors. The TIBS is measured on a 5-point Likert scale. Cronbach alpha was 0.95, the coefficient was 0.848.

State Motivation for Class Scale: The participants' state motivation for the class was measured with Christophel's (1990) state motivation scale for the class which was adapted to Turkish by Kurt and Kurt (1999). IT contains 12 items such as 'I felt motivated', 'I felt interested', 'I felt involved', etc. The adapted scale used five points whereas Christophel used seven points. The Cronbach alpha coefficient was 0.765. These Cronbach's coefficients are considered indicative of sound reliabilities for education (Isaac & Michael, 1995)

Results

First, we examined the impact of memorizing and calling students by their names on students' teacher immediacy evaluations, state motivation and academic achievement by MANOVA analysis. Further, we examined the impact of calling students by their names and welcoming them throughout the semester on students' academic achievement with the effect of state motivation and teacher immediacy. We investigated the role of teacher immediacy in this construct as a mediator between motivation and academic achievement. The aim was to recognize whether the treatment directly affected teacher immediacy, which, in turn, affected academic achievement. *(AA=Academic Achievement, TI=Teacher Immediacy, SM=State Motivation)

Table 1. Descriptives

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Variables	Groups	Pre-test		Post-test		Δ	
		Mean	SD	Mean	SD	Mean	SD
SM	Treat- ment	33.10	6.468	45.97	9.158	12.87	2.903
	Con- trol	33.30	7.731	47.80	8.081	14.50	8.697
TI	Treat- ment	131.62	19.214	179.00	22.113	47.38	28.085
	Con- trol	119.30	17.037	168.56	22.860	49.26	23.304
AA	Treat- ment	9.21	3.302	12.46	2.644	3.26	3.470
	Con- trol	11.50	2.533	13.14	3.084	1.64	3.122

The result was significant for the treatment effect with the Wilks' Lambda value of 0.856 and the F value of 7.237 ($p = .001$).

Table 2. Treatment effect

Variables	MS	B	SE	t	F	p
TI	3323.078	12.315	3.850	3.199	10.233	.002
SM	73.026	1.826	1.372	0.997	0.995	.321
AA	79.909	1.910	0.858	2.227	4.958	.029

Second, we tested the effects of teacher immediacy as a mediator. The design depicted a mediation model with a single mediator, Teacher immediacy, through which State motivation exerted its effect on Academic achievement. The models were composed to investigate the direct, indirect and relatively indirect effects on the academic achievement of the students. The first model examines the effect of state motivation and teacher immediacy on academic achievement when teacher immediacy as a covariate. The following models test the single direct effects on each other with the assigned path names (Hayes and Preacher, 2014). The results indicate that path-a and path-b were significant.

It implies that we can conclude academic achievement's association with teacher immediacy and state motivation combined ($B_1=0.16$, $t_1=2.06$, $p=.047$, $B_2=0.06$, $t_2=2.65$, $p=.012$). Consequently, teacher immediacy was positively associated with state motivation ($B=1.8$ $t=3.7$, $p=.001$). However, academic achievement's association with state motivation could not be concluded ($B=0.05$, $t=0.742$, $p=0.463$), which means that path-c in the model was not significant.

Mediation analysis was tested using the bootstrapping method with bias-corrected estimates (MacKinnon, Lockwood, Hoffman, West, and Sheets, 2002; MacKinnon, Lockwood, and Williams 2004; Williams and MacKinnon, 2008; Biesanz, Falk, and Savalei, 2010; Hayes and Scharnow, 2013). The %95 confidence interval of indirect effect was obtained with 5000 bootstraps resamples. Results of the mediation analysis confirmed the mediating role of teacher immediacy in the relationship between academic achievement and state motivation ($B-B_1=1.40$, $CI=[1.261, 1.539]$).

Table 4. Mediation analysis

Model		B	Std.error	Beta	t	Sig
1	SM	0.156	0.076	0.364	2.058	.047
	TI	0.058	0.022	0.469	2.648	.012
2	SM	0.052	0.070	-0.121	0.742	.463
3	SM	1.794	0.486	0.519	3.692	.001
4	TI	0.150	0.041	0.519	3.692	.001

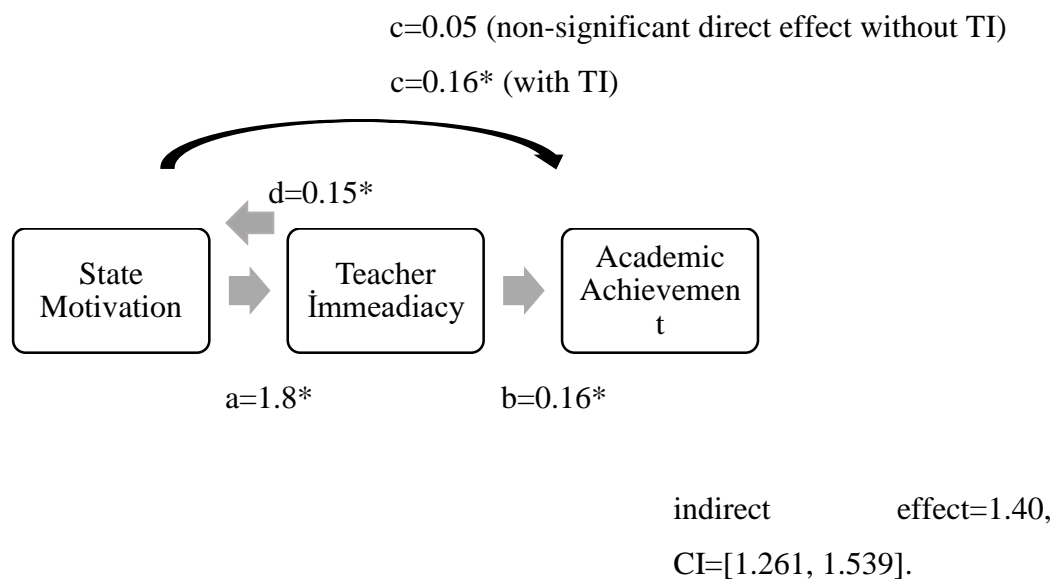


Figure a. Proposed model final results.

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Discussion

The purpose of this study was to examine the impact of two methods about teacher immediacy on students' state motivation, teacher immediacy evaluations and cognitive learning. The first method was to allocate the first lecture with the treatment group for an acquaintance meeting at the beginning of the semester, asking students to introduce themselves, memorizing their names and calling them at the end of the lecture. We have examined the impact of this first method on the students' state motivation and teacher immediacy evaluations. The second method was to welcome the students in the treatment group at the entrance of the classroom every week before the lecture by calling their names. This method lasted throughout the semester. Through the posttests, we have examined the impact of these methods on the students' state motivation, teacher immediacy and cognitive learning outcomes by comparing the treatment group's scores with the control group's scores.

First Phase

The findings revealed that the first method worked for increasing the students' teacher immediacy evaluations. The students' evaluations of teacher immediacy in the treatment group were significantly higher than the students in the control group. Teacher immediacy is about building physical or psychological closeness in the relationships with students (Mehrabian, 1969). Although calling students by their names is one of verbal teacher immediacy behavior (Comadena, Hunt, & Simonds, 2007), a faculty member trying to memorize students' names from the first lecture of the semester may have sent a strong message to the students about how much he valued and cared them. This message would be even stronger for this population because the students were prospective religion teachers from the faculty of theology in the southeastern region of Turkey. These factors fostered a traditional student-faculty relationship, which cannot be characterized with psychological closeness (Geçer & Gümüç, 2010). Some students in the treatment group personally stated that they had never seen such an effort from a faculty member before. Therefore, it can be asserted that even in a classroom where students are used to traditional relationships, an attempt to establish psychological closeness with students by

memorizing their names in the first lecture of the semester contributes positively to teacher immediacy.

Although the findings revealed a significant difference between the groups after the application of the first method, a similar outcome did not occur for state motivation. Therefore, it can be asserted that memorizing and calling students by their names does not contribute to state motivation at the beginning of the year. This finding seems inconsistent with previous studies (Comadena, Hunt & Simonds 2007; Zhang & Oetzel (2006). The reason for inconsistency may be a difference in research procedures. In previous studies, instructional tasks and activities such as listening to a subject from the teacher were involved. In our study, the first lecture did not contain anything about the concepts and skills that would be learned in the classroom. The first lecture was not about instruction. State motivation is about classroom tasks, concepts and skills (Brophy, 1983). Therefore, the students in the current study may not have data to connect state motivation and teacher immediacy.

Second Phase

The analyses revealed teacher immediacy was a mediator between state motivation and cognitive learning. State motivation made its positive contribution to cognitive learning through teacher immediacy. Teacher immediacy was found to be related to both concepts. As was mentioned above, the findings on teacher immediacy and cognitive learning were mixed. This finding is in line with the studies that have found a direct positive relationship between teacher immediacy and cognitive learning (Witt & Wheelless 2001; Allen, Witt, & Wheelless 2006). The differences in study designs may be the reason for the inconsistency of the findings with the studies that did not find a relationship between teacher immediacy and cognitive learning. Both cognitive learning and building solid relationships required time. Teacher immediacy is about building a close relationship with students and it is easier to build a close relationship when you have the whole semester. Therefore, it is reasonable to claim that the current study might have higher ecological validity in terms of teacher immediacy compared to the others that recruited artificial instructors (who were not the actual instructors of the courses), short-term lectures or video clips to build teacher immediacy (Gorham, Cohen, & Morris, 1997; King & Witt 2009). In the current study, the teacher and the students met every week, which

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provided them time to know each other. In return, this would increase the genuineness and deepness of the relationship between the teacher and the students which might have contributed to positive cognitive outcomes.

The findings also yielded that, besides the direct effect on cognitive learning, teacher immediacy worked as a mediator for state motivation. Zhang and Oetzel (2006) found that teacher immediacy directly and indirectly through motivation affected cognitive learning. Immediacy has a greater impact on motivation than on cognitive learning. Therefore, they have claimed that teacher immediacy fosters state motivation and an increase in state motivation positively affects students' cognitive learning. In our study, we have found that teacher immediacy directly affects cognitive learning and it has a significant reciprocal relationship with state motivation. State motivation indirectly through teacher immediacy affects cognitive learning. The participating students for the first time (some students expressed this fact) witnessed such an effort from a faculty member for their improvement. Experiencing such an effort on a personal level might cause taking faculty as a role model (Rotgans, & Schmidt, 2012), which would increase the importance of the teacher and make it more important than state motivation.

In summary, the current study contributes to the teacher immediacy literature on several aspects. The study has revealed that memorizing students' names in the first lecture of the semester increases students' teacher immediacy evaluations. Thus, it would provide a positive start for teachers. The study has also yielded that teacher's purposeful efforts such as welcoming each student at the entrance of the classroom before a lecture to improve relationships with students positively contribute to student's state motivation, teacher immediacy evaluations and cognitive learning. The longitudinal experimental design that was used in an authentic classroom setting strengthens the teacher immediacy literature by providing ecological validity. The study was conducted in an environment where students would be exposed to traditional values. Thus, the findings of the study contribute to the generalizability of the positive effects of teacher immediacy in educational settings.

Limitations

Paradoxically, the characteristics of the study that increased its ecological validity are also the main limitation of the study. The teacher was aware of the purpose of the

study. This may be a concern for the equality of instruction between groups. The scores of the control groups of state motivation, teacher immediacy, cognitive learning were statistically significant. These data can support the quality of the control groups' instruction. However, in the future, all lectures can be video recorded and three pairs can be randomly selected among these lectures. The selected lectures can be sent to a panel of experts (consisting of two or three experts). The experts can evaluate the equality of content knowledge and teacher performance for two groups. Future experimental studies can also target populations that are more familiar with modern teacher-student relationships than prospective religion teachers from the faculty of theology. Seeing a teacher who tries to establish psychological and communicational closeness the first time might increase the impact of the application. Future studies should also analyze, in more detail, the factors that are effective on students' evaluations such as being called by their names or being remembered for their uniqueness to make a difference. Almost all the participants were female. Therefore, the study did not provide much about male students. Gorham and Cohen (1997) found that female students were more responsive to immediacy.

Educational Implications

Since the findings have revealed the positive impact of memorizing student's names on students' teacher immediacy evaluations, it is reasonable to suggest teachers design the first lecture as an acquaintance lecture and try to memorize their students' names. Memorizing students' names in one lecture would be difficult for some teachers. Therefore, during registration, teachers would want an attendance list with pictures of students. Thus, before the first lecture, teachers can work on memorizing their students' names. Also, teachers can meet their students at the entrance of the classroom before lectures and establish a one-to-one interaction with them.

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