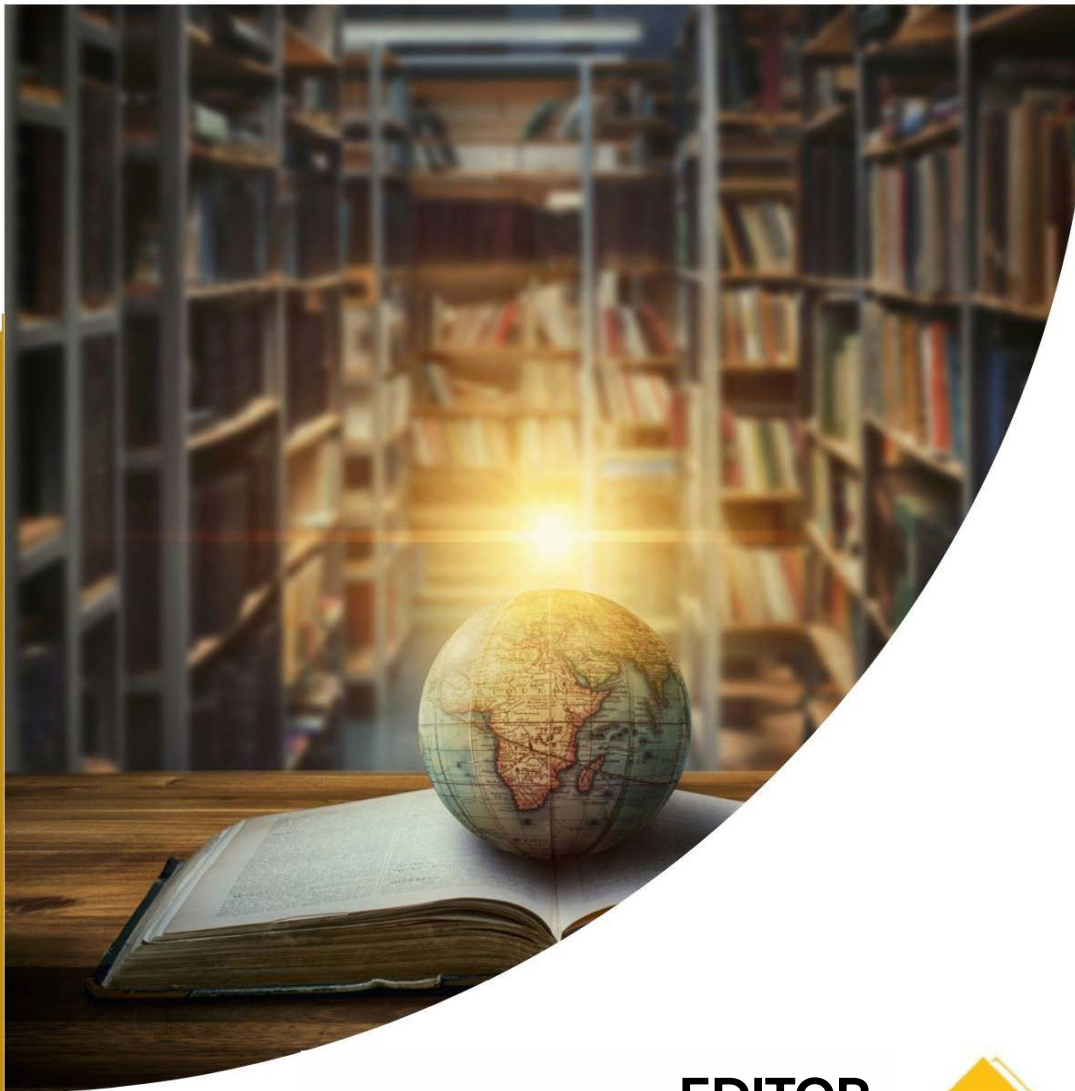


# ADVANCED AND CONTEMPORARY STUDIES IN EDUCATIONAL SCIENCES



**EDITOR**  
**Prof. Dr. Rasim Erol DEMIRBATIR**



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CONTEMPORARY STUDIES IN  
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## CHAPTER 1

# "NATURAL LANGUAGE PROCESSING OF THE U.S. DEMOCRATIC PRIMARY DEBATES: A NOVEL IDEA FOR THE CBI IN ELT"

BUĞRA ZENGİN<sup>1</sup>

RABIA KORKMAZ TAN<sup>2</sup>

OYA MERT<sup>3</sup>

### ABSTRACT

One of the activities in U.S. presidential election processes reflecting the effects of communicational language use is town hall forums at which candidates listen to the community's views on public issues through face-to-face person-to-person question-answer interaction and offer their ideas for solutions. These town hall forums are a means of political participation in which active citizens feel a sense of impact on policies serving empathy and providing a data source for the development of public policies. Commonly preferred by the candidates to build and strengthen connections with constituents, these forums present samples reflecting real-world, real-life contexts expressed in real, natural English featuring elements of communicative competence. With all these qualities evaluated within the applied linguistics framework attempts are made to identify, investigate, and develop practical solutions for language-related real-life problems, issues, and contexts, can the contents in the town-hall forums be used in English language education materials development effectively and efficiently? This study argues that for the maximization of materials development, computer-assisted theme/task-oriented content-based English (as an additional language) instruction can benefit from the perspective diversity of applied linguistics with this purpose, the town hall meeting transcripts of Democratic Party candidates for

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the 2020 U.S.A. Presidential elections have been analyzed with natural language processing, a subfield of artificial intelligence. As well as inferences drawn, the analyses have been conducted taking into consideration the words and word sequences with the highest frequency, and the sentential contexts as well as words semantically close to each other have been detected and presented in graphics, tables, and texts. A fundamental objective is to conduct required analyses of textual data in the structurally complex natural language. As the universal aspects of the rhetoric consisting of socially relevant public issues naturally appeal to other peoples as well, the forum contents can provide English language materials developers with beneficial sources regarding authentic language use integrated with interesting and motivating content. These materials serve the integration of English language skills and political literacy, as mutually supportive dual learning outcomes, and raising required consciousness should be endeavored through non-governmental think-tanks. In this study, the candidates' educational profiles have been presented. The study also exhibits quantitative data on the Professional and/or educational background of the townhall participants who presented their questions to do candidates.

**Keywords:** Applied Linguistics, Content-based instruction, Natural Language Processing, ELT.

## INTRODUCTION

With its intriguing unscripted interactive character, the spoken discourse of U.S. presidential election Town Hall meetings provides the learners of English with the kind of input rich in multi-word units of authentic conversational English and public policy concepts relating considerably to those involved in active citizenship. Another advantage is that U.S. cable networks host these town hall forums which they stream as well and the transcription of all the spoken content can be downloaded on the websites of these TV channels as well as transcription service providers like rev.com. Transcriptions facilitate not only the challenge of highly paced, vocabulary-rich listening input but also the processing of the natural language. This study argues for the reconceptualization of the policy-oriented parts of the town hall forums as language learning materials for the teaching of English to speakers of other languages. To back up the argument, the means of natural language processing have been resorted to. Besides, as an indispensable key component of the circumstances typically associated with the discourse, audience members and the candidates have been classified in terms of educational and professional status. The transcripts were searched with Google search queries resulting in their detection on the CNN website of the transcript links providing free access to all the Democratic town

halls of the variety of the presidential candidates. Highlighting policy, the findings demonstrate a broad range of themes related to public policies such as health, environment, economy, crime, and law. All this policy content expressed in chunk-rich natural conversational English can be exploited and converted to English language education materials to be used in computer-assisted, theme/task-oriented content-based instructional approach. Tasks that can be recommended would be writing and dramatizing dialogues drawing on or modeling the town hall interactions, and analytical commentary tasks accompanied by political communications experts or academics from policy areas. Materials development exercises can also be actualized with learners involved in the selection of content to be highlighted as resonating with universal human experiences.

### *1. Literature review*

The idea proposed in this work can be effectively realized through a combination of CALL and CBI approaches enriched with Task-Based Language Teaching, which relies upon a theory of learning, rather than that of language. Benefiting from transcription technology as a means of computer technology Computer-Assisted Language Learning makes Computer-Assisted Language Learning a component of the combination. Scaffolding is provided by building upon the learners' prior knowledge of reading comprehension, transcription facilitates listening challenges, and learners can select town hall contents that suit their needs and work with them at their own pace. All this strategy can be actualized through specially designed instructional tasks, tasks designed especially for the integration of content in authentic English of town hall forums with the potential of raising consciousness to political literacy. To understand the above-mentioned combination, it would be useful to relate to what Steinberg and Sciarini (2006) briefly wrote with the components of the combination in their book chapter titled *Second Language Methods*. As stated in Steinberg and Sciarini (2006, p. 155), Content-Based Instruction (CBI), as an approach to language instruction, focuses on language as a means of getting information, construction, and delivery of which is through texts and discourse language instruction is based on. As they are intertwined several skills are mastered together. Language is assumed to be purposeful. When the second language learners' purpose in using this language is getting information, information which is of interest and use to the learners and leading to the goals they desire. CBI's approach to language instruction makes it possible to achieve speech communication and literacy, which are two aspects of the same goal (Steinberg & Sciarini, 2006, p. 155). Target language learning is better with learners engaged



in meaningful activities with tasks, which provide stimulation of communication and regulation of input and output of information improving motivation and promoting learning with authentic materials used. In this description of Task-Based Language Teaching (Steinberg & Sciarini, 2006, p. 157).

Clearly in favor of the motivation of EFL/ESL teachers' adequacy in undertaking the

development of their instructional materials, Pardo and Tellez (2009, p. 172) argue against its confinement to text developers. With the teacher-developed materials what is boosted is "not only effective learning settings and outcomes, but also teachers' pedagogical practice/performance" (Pardo and Tellez 2009, p. 184). Corrales and Maloof (2011) have noticed and underlined the motivation reflected in foreign language learners' feelings to do the support provided with the relevant, meaningful, interesting, and useful topics, materials, and activities in the CBI approach. The town hall content can also encourage depth of analysis if evaluated with critical thinking. This is significant since, as Political Science Professor Emre Erdoğan stated in a television program on the U.S. 2020 Presidential election coverage should not be treated as if they are horse races or a matter of life and death. On the contrary, Prof. Erdoğan emphasizes, queries and discussions should be on the constituents' reasons or motivations, the argumentation of candidates, and backgrounds (patterns of consumption, rural/urban distinction, ethnicity, future anxiety) program (Haberturk TV, HT 360 November 6, 2020).

"English for specific purposes (including but not limited to English for academic purposes) is a very well-known type. Other versions popular and others less well known are theme-based, task-based, adjunct, and sheltered CB-ESL" (Content Based English as a Second Language). Not necessarily designed for tertiary education, theme-based and task-based types of CB-ESL, which are broader approaches in contrast to the sheltered and the adjunct, "are actually used at many educational levels" (Oxford, 1993, p. 78). In the theme-based type, integration of language skills is designed through the study of themes or a theme (e.g. (Brinton, Snow, & Wesche, 1989); and in the task-based type the integration of language skills is through meaningful language tasks, and the teacher can relate these meaningful tasks to a specific body of content, although not necessarily Scarcella & Oxford, 1992).

## **2. Method**

### **2.1. Meta-analysis approach**

Technology has paved the way for alternative realities within the natural world. People use digital technology and digital operating tools to access these

alternative virtual realms (Bonnet & Westerman, 2021). The prevalence of such technology dates to a relatively recent period. This has led to the emergence, development, and alteration of not only new technological advancements but also new terms and concepts.

The study design required the use of NLL (Natural Language Processing) for a theme-based detection of patterns in the spoken discourse of the U.S. Town Hall meetings. To back up the argument that this content has the potential to engage and motivate (young) adult learners of English who can benefit from this material in terms of policies appealing to the sensitivity of politically literate, active citizenship as well as the formulaic language in which this is expressed. The advantage of NLL is that both individual word sequences are processed. For triangulation purposes the educational/professional backgrounds of the candidates and audience members in the town hall forums. For, the patterns in the language in use are typically associated with the participants, one of the key components of the circumstances.

Natural Language Processing (NLP), a subfield of artificial intelligence, is used in the analysis of unstructured textual data (Manning et al., 2014). This study was developed using the Anaconda distribution and Jupyter Notebook via the Python programming language to perform NLP analyses. Through this application, large, qualitative, and unstructured data comprising texts are automatically classified, analyzed, and significant insights are derived.

Natural Language Processing serves as a technology field bridging natural languages and texts with computers, often considered a sub-discipline of artificial intelligence. NLP, a scientific study, has emerged from the amalgamation of linguistics with mathematical methods (Manning & Schutze, 1999; Kang et al., 2020; Torfi et al., 2021).

NLP is divided into two primary parts. The first, called Natural Language Understanding (NLU), aims to extract valuable information by analyzing texts in documents (Schank, 1972). The second, Natural Language Generation (NLG), focuses on generating texts that can be understood by humans (McDonald, 2010). This study primarily focuses on the first method, analyzing the dataset derived from U.S. presidential debates, and describing subtasks such as content analysis and sentiment analysis. Additionally, this research amalgamated data from various platforms to transform them into processable data via natural language processing.

Unlike experimental studies, sample studies aim not to compare but to explore (Hancock & Algozzine, 2006). A sample study involves an in-depth investigation using multiple data collection methods to systematically gather information about how a limited system operates and functions (Chmiliar, 2010). In qualitative

research, the researcher attempts to understand the nature of social reality by gathering subjective data, such as individuals' perceptions, feelings, experiences, thoughts, and opinions, in an exploratory manner, much like assembling pieces of a puzzle. During this process, data is organized and classified. The analysis yields patterns, concepts, and relationships related to the research problem. Results are reported and discussed (Gürbüz & Şahin, 2014). However, due to the inherent nature of qualitative research, there is not complete unanimity regarding methods and technical processes (Özdemir, 2010).

## 2.2. *The natural language processing analysis of the dataset used*

```
answers = []
categories = []
with open('/content/drive/MyDrive/Colab Notebooks/NLP/jj2.tsv','r') as tsv:
    count = 0;
    for line in tsv:
        a = line.strip().split('\t')[:3]
        if a[1] in ['Crime & Law', 'Economy', 'Environment', 'Health', 'People', 'Politics & Policy']:
            answer = a[2].lower()
            answer = re.sub('\s\W', '', answer)
            answer = re.sub('\Ws', '', answer)
            answers.append(answer)
            categories.append(a[1])
```

The code snippet above reads the dataset, separates questions, categories, and answers from each other, preparing them for processing.

```
answer_tr, answer_te, category_tr, category_te = train_test_split(answers, categories)
answer_tr, answer_de, category_tr, category_de = train_test_split(answer_tr, category_tr)
print("Training: ", len(answer_tr))
print("Development: ", len(answer_de),)
print("Testing: ", len(answer_te))
```

```
Training: 432
Development: 145
Testing: 193
```

At this stage, we are splitting the data into Training, Validation, and Test sets. The training data is the initial stage used to train the machine learning model. This data enables the model to learn and adjust suitable parameters by making predictions on unseen data while leveraging the training data. The validation dataset demonstrates how well our model has learned, aiding in the adjustment of hyperparameters. We validate the model's learning based on the training and validation datasets and further confirm it using the test dataset, which the model has never encountered before. In this study, 432 instances of training data, 145 validation instances, and 193 test instances were used.

```
from wordcloud import WordCloud
text = " ".join(answers)
wordcloud = WordCloud().generate(text)
plt.figure()
plt.subplots(figsize=(10,8))
wordcloud = WordCloud(
    background_color="white",
    max_words=len(text),
    max_font_size=40,
    relative_scaling=.5).generate(text)
plt.imshow(wordcloud)
plt.axis("off")
plt.show()
```

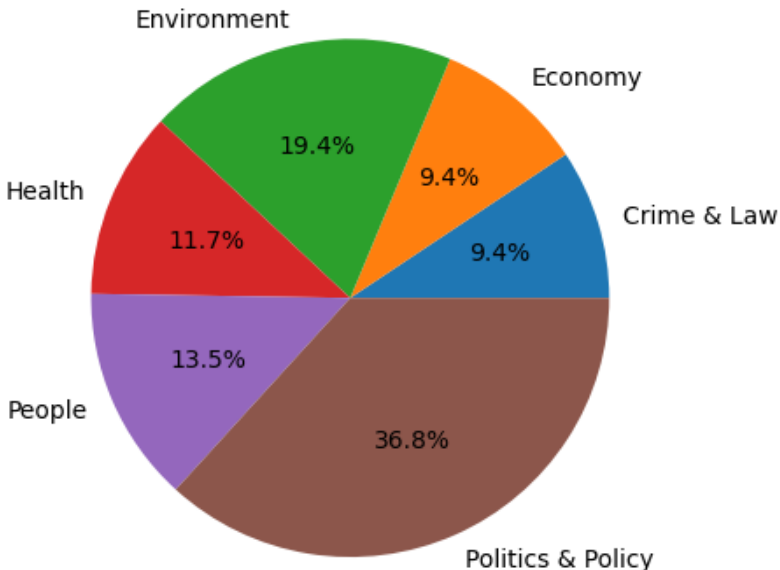
The above code generates the concept map depicted in the image below. When looking at the concept map, it is noticeable that larger text represents the most frequently used terms, with the font size decreasing as the frequency decreases. Upon examining the concept map below, understanding the topic of the text becomes quite straightforward.



It analyzes the text to determine unique words (features) and their frequencies. It creates a vocabulary based on the words in the 'answer\_tr' data. Using 'labelEncoder,' it assigns a unique numerical value to each class, facilitating models to understand and learn from the data. LabelEncoder categorizes our Train, Development, and Test categorical data into numerical labels.

```
labels = list(set(all_categories))
counts = []
for label in labels:
    counts.append(np.count_nonzero(all_categories == label))
ct=['Crime & Law', 'Economy', 'Environment', 'Health', 'People', 'Politics & Policy']
plt.pie(counts, labels=ct, autopct='%1.1f%%')
plt.show()
```

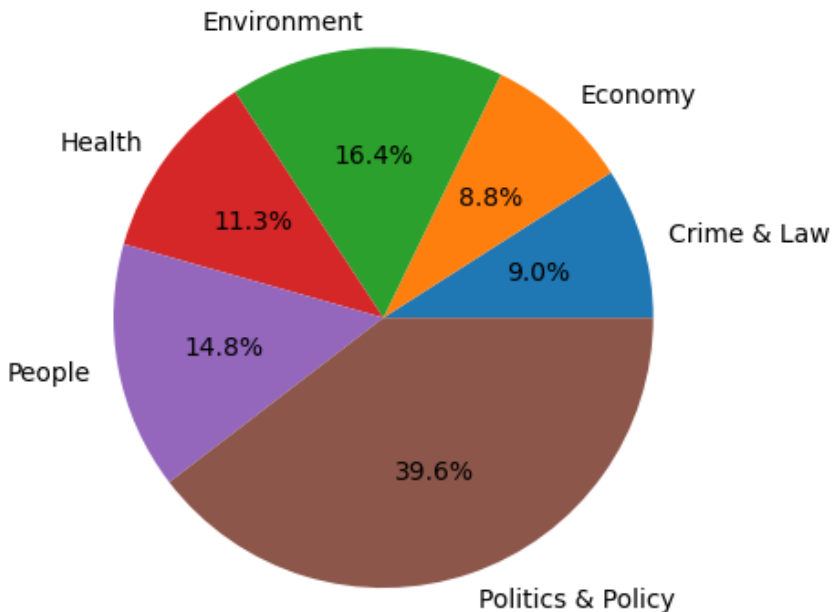
The above code determines the category of existing texts through analysis. When examining the graph below, it is possible to observe the percentage distribution of categories within the dataset's conversations. Text classification can be achieved using machine learning algorithms. In this code snippet, texts have been divided into 6 different categories, but it is possible to increase the number of categories.



```

labels = list(set(Ytr))
counts = []
for label in labels:
    counts.append(np.count_nonzero(Ytr == label))
ct=['Crime & Law', 'Economy', 'Environment', 'Health', 'People', 'Politics & Policy']
plt.pie(counts, labels=ct, autopct='%1.1f%%')
plt.show()

```



It only displays the percentage rates of categories within the Training data. When compared with the results obtained for all the above data, it is noticeable that the model performs exceptionally well only on the training data.

```

print("Training Multinomial Naive Bayesian")
nb = MultinomialNB()
nb.fit(Xtr, Ytr)
pred_nb = nb.predict(Xde)
print(classification_report(Yde, pred_nb, target_names=encoder.classes_))

```

The above algorithm performs text classification. When the training data is classified according to categories, the regression analyses of the predicted categories are close to 1 or near 1. This indicates highly successful results in predictions.

Training Multinomial Naive Bayesian				
	precision	recall	f1-score	support
Crime & Law	0.78	0.70	0.74	10
Economy	1.00	0.63	0.77	19
Environment	0.88	0.81	0.85	27
Health	1.00	0.81	0.89	21
People	0.64	0.53	0.58	17
Politics & Policy	0.66	0.88	0.76	51
accuracy			0.77	145
macro avg	0.83	0.73	0.76	145
weighted avg	0.80	0.77	0.77	145

```
print("\n\nPredicting test data using Multinomial Naive Bayesian")
pred_final = nb.predict(Xte)
print(classification_report(Yte, pred_final, target_names=encoder.classes ))
```

The category classification algorithm mentioned above has been applied to the test data, and the prediction results appear to be quite good, as indicated by the regression analysis in the precision field.

Predicting test data using Multinomial Naive Bayesian				
	precision	recall	f1-score	support
Crime & Law	0.88	0.65	0.75	23
Economy	0.80	0.80	0.80	15
Environment	0.92	0.94	0.93	51
Health	0.86	0.90	0.88	20
People	0.76	0.57	0.65	23
Politics & Policy	0.79	0.92	0.85	61
accuracy			0.84	193
macro avg	0.84	0.80	0.81	193
weighted avg	0.84	0.84	0.83	193

```
f = open('/content/drive/MyDrive/Colab Notebooks/NLP/d1.txt', 'r', encoding='utf8')
text=f.read()
t_list=text.split('\n')
corpus=[]
for cumle in t_list:
    corpus.append(cumle.split())
```



The command above tokenizes each sentence into its individual words. When the following command is executed, it's possible to observe that the data belonging to a sentence is separated into vectorized form

```
print(corpus[:1])  
[['\ufe00Let's', 'talk', 'about', 'President', "Trump's", 'impeachment.', "It's", 'news',  
model=Word2Vec(corpus, window=5, min_count=5, sg=1)  
model.wv["Trump"]
```

Each word is represented by its own vectors. Each value in the vector contains the result of calculating the semantic relationship between the words in the sentence based on the CBOW or skip-gram methods.

```
array([-0.14258753,  0.11307345,  0.24324627, -0.1070929 , -0.21563686,  
-0.49222833,  0.30358344,  0.1348531 , -0.10296162, -0.10984246,  
0.19894573, -0.49358267,  0.02436888,  0.153147 ,  0.21623391,  
0.25172386,  0.40906122, -0.21700539, -0.31556782, -0.22882612,  
0.46318054,  0.32837036, -0.00877301, -0.04822036,  0.43598086,  
0.04375486, -0.24416897, -0.5063572 ,  0.25142798, -0.05242824,  
0.3005148 ,  0.36888823,  0.65721434, -0.12946759,  0.08106668,  
-0.00131922,  0.32872012, -0.37562427, -0.29725713, -0.17524432,  
-0.05151977,  0.21078402,  0.18047301, -0.07031748,  0.59989715,  
-0.14924528, -0.47167698,  0.13441634, -0.08707218,  0.46981892,  
-0.12533587, -0.31420693,  0.08386002, -0.30296952,  0.11356162,  
0.12170524,  0.02618179,  0.03358081,  0.2754287 ,  0.34365556,  
-0.27951324,  0.5225703 ,  0.18367994, -0.20440634,  0.15072612,  
0.02947187,  0.08399453, -0.12617403,  0.15632679,  0.49828824,  
-0.01961396, -0.04048477,  0.02999071, -0.36751014,  0.39041862,  
-0.10538713,  0.11075506, -0.32085726,  0.29392916,  0.37933016,  
0.3131382 ,  0.29005605, -0.3258566 ,  0.04068144, -0.40450606,  
0.15930745,  0.1972661 ,  0.06176625, -0.01419373, -0.18909878,  
0.29284236,  0.20648414, -0.24923383, -0.5794622 ,  0.20848887,  
0.06414963,  0.36761513,  0.07293939,  0.34283558, -0.29604617],  
dtype=float32)  
model.wv.most_similar('Climate',topn=5)
```

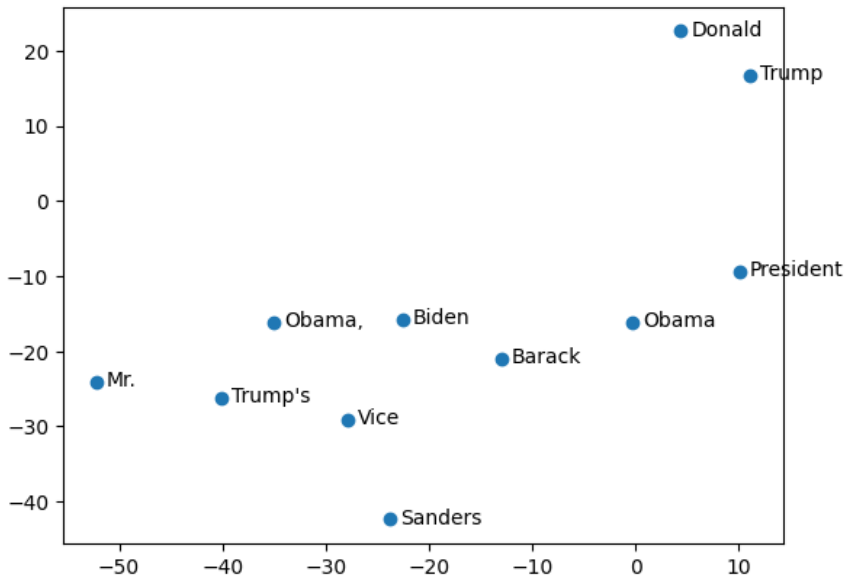
After creating the model and generating word vectors, the command above allows for listing words that are interconnected with each other.

```
[('Paris', 0.9274985194206238),  
 ('defeating', 0.9265128374099731),  
 ('Roe', 0.923195481300354),  
 ('difference.', 0.9184237718582153),  
 ('socialism', 0.9174294471740723)]
```

```
def closeswords(model,word):  
    word_vectors=np.empty((0,100))  
    word_labels=[word]  
    close_words=model.wv.most_similar(word)  
    word_vectors=np.append(word_vectors,np.array([model.wv[word]]), axis=0)  
    for w, in close_words:  
        word_labels.append(w)  
        word_vectors=np.append(word_vectors,np.array([model.wv[w]]), axis=0)  
  
    tsne=TSNE(random_state=0, perplexity=4)  
    Y=tsne.fit_transform(word_vectors)  
  
    x_cords=Y[:, 0]  
    y_cords=Y[:, 1]  
  
    plt.scatter(x_cords, y_cords)  
  
    for label, x, y in zip(word_labels, x_cords, y_cords):  
        plt.annotate(label, xy=(x, y), xytext=(5, -2), textcoords='offset points')  
  
    plt.show()
```

```
closeswords(model,'President')
```

The above command displays the representation of words that have a semantic relationship with each other on the graph below. Words with close relationships are depicted closer together.



```
import nltk
nltk.download('punkt')
from nltk.tokenize import sent_tokenize, word_tokenize
with open('/content/drive/MyDrive/Colab Notebooks/NLP/d1.txt', 'r') as file:
    text = file.read()
```

```
target_words = ['climate', 'change']
sentences = sent_tokenize(text)
```

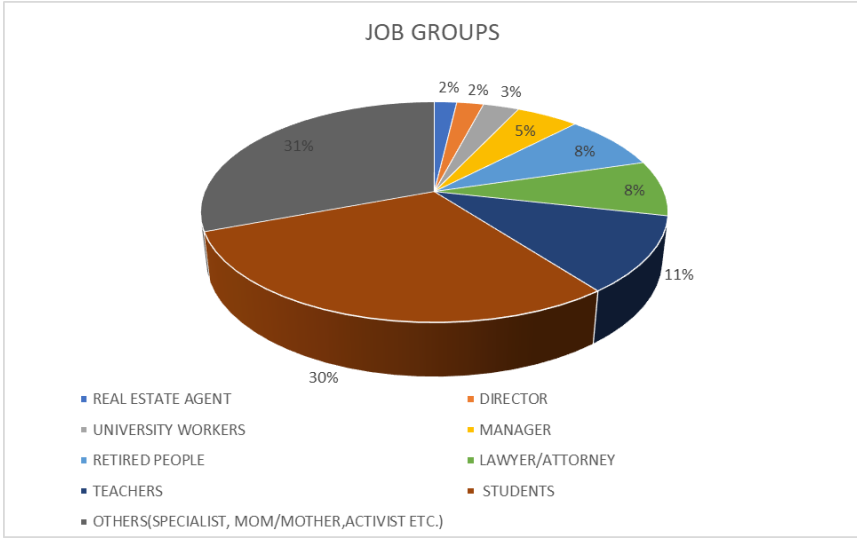
```
target_sentences = []
for sentence in sentences:
    words = word_tokenize(sentence)
    if all(word in words for word in target_words):
        target_sentences.append(sentence)
```

```
for sentence in target_sentences:
    print(sentence)
```

The command above is developed to print sentences using word pairs. Sentences where the words 'climate' and 'change' are used together can be seen in the output below.

And that's good, getting back into the international climate change agreement, the clean power standards, the gas mileage standards. I like that question, because I gave a preview of what I think we need to do, the international climate change agreement, clean power. And I think it's really important to make the economic case for climate change. So when I announced my candidacy in the middle of that blizzard, and he made fun of me for talking about climate change in a blizzard. And then that makes it harder, right, to work on these long term challenges, some of which we talked about, and things like bringing And that is everything from workforce training to immigration reform, which would be very good for our economy, to climate change. It is under threat from climate change, though. So given that fossil fuel use is the primary driver of climate change, what will you do to phase out fossil fuels as quickly as possible. So we have to acknowledge that we're already on the curve of climate change. When politicians talk about preventing climate change, I get frustrated, because you can't prevent something that is already here and I have not talked to them about climate change yet. You're probably going to have to talk to them about climate change.

<b>Possible Word Sequences</b>	
Big Pharma(2)	Health Insurance(31)
Big Tech(3)	Health Plan (3)
Carbon-Free(6)	Mortgage Loan(1)
College Education(5)	Nuclear Arms(2)
Conflict Of Interest(1)	Nuclear Weapons(2)
Constitutional Amendments(1)	People Of Color(29)
Data Privacy(1)	Private Health Insurance(9)
Data Security(1)	Private Insurance Industry(2)
Department Of Education(11)	Private Insurance (28)
Drop Out(2)	Public Education(27)
Drug Abuse(3)	Racial Equality(1)
Drug Offenders(1)	Racial Inequality(1)
Education Act(1)	School Administrator(1)
Equal Opportunity(4)	Secret Service(1)
Green New Deal(41)	Social Justice(3)
Gun Control(7)	Social Security(38)
Health Care /Healthcare (245/14)	Undocumented Immigrants(14)
Health Care Cost(1)	Universal Background Checks(25)
Health Care Delivery(1)	Woke (Politically)(1)



JOB GROUPS	NUMBER
REAL ESTATE AGENT	5
DIRECTOR	6
UNIVERSITY WORKERS	8
MANAGER	14
RETIRED PEOPLE	22
LAWYER/ATTORNEY	22
TEACHERS	30
STUDENTS	80
OTHERS (SPECIALIST, MOM/MOTHER, ACTIVIST ETC.)	83

\*There is a detailed table of the Other section in the appendix section.

On the table above the audience members who asked questions to the candidates were classified in occupational categories. The category called as OTHERS includes the professions numbering less than five, but since this group is a large group percentage of which is %31 (numbering 83 out of 270 professional profiles) this reflects an extra, further variety taking into consideration the students, teachers, lawyer/attorney, retired people, manager, university workers, director, and real estate agent category. After emphasizing the variety of profiles in the audience, it is essential to highlight those directly related to education. First of all, there are 80 profiles categorized under STUDENT. Secondly teachers number 30. Together with the university workers numbering eight, all the profiles are at least 118 in number. Retired people and

the legal sector come second with the lawyer/attorney category coming second and third after the teachers category both twenty-two in number. The managerial positions category closely follows the legal and retired category numbering twenty (fourteen plus six). The last category is real state agent.

All these numbers show that those in the education field (especially students and teachers) are significantly involved in policy issues showing the social responsibilities of active citizenship. This is highly important in assessing the necessity of this kind of study as ours which has considerable implications for English language teaching as a specific field and education in general.

## CONCLUSION

The study demonstrated that the integration of samples of town hall rhetoric into English language learning materials development has significant potential for a content-based instruction approach actualized with such computer-aided technologies on natural language processing software and transcription and conceptualized with the depth of task-based learning theory. The discourses in the United States presidential election town hall meetings have the potential to engage the learners of English as sources of information that can benefit people in general. Many issues of U.S. Americans addressed in U.S. town hall meetings are likely to overlap those of other peoples around the world. Similarities outweigh differences to the extent that there are many underlying universals. The content we are exposed to through U.S. presidential town halls provides the viewer/listener with a broad range of various dimensions of real-world real-life contexts. Since participants are U.S. Americans, the language is authentic American English and what makes town hall forums unique in comparison to debates and campaign rally speeches is their interactive nature. The ratified audience members presenting their questions are likely to reflect every rank and file of the public. As the audience members, some of whom are undecided, voice their demands, and the candidates show that they are good listeners and problem solvers, the input is supposed to be rich in the effective use of language (e.g., content to be modeled regarding sociolinguistic competence and pragmatic competence). The questions of the participating Americans as well as those of the town hall meeting moderators are often representative of the public opinion in the U.S., much of which overlaps with peoples of the world. The candidates are supposed to sound relevant to the constituents addressing their problems, articulating their feelings getting across the message that he or she is one of them, and offering solutions exhibiting a problem-solving mentality. On the other hand, it is not unlikely to expect manipulative toxic speculations in political rhetoric as well. That is, it would be naive to assume that all content is beneficial if exposed without critical thinking. However, ironically, this is the very reason this content should not be avoided as if an abundant amount of it were not easily accessed on the web. On the contrary, guided with consciousness-raising guidance would be provided efficiently through a collaboration of relevant potential stakeholders for solutions for the development of English language learning/practice materials that would benefit political literacy and language skills such as experts in foreign language education, political communication, and comparative politics.

In essence, learners are people, so a comprehensive relevant conceptualization of education should not be detached from the realities of their lives as citizens. This holds to the teaching of English to speakers of other languages as well, which

should not conceptualize the target language as an end in and of itself but to access beneficial, engaging, and motivating content.

An expert on comparative politics and a powerful commentator on elections Prof. Dr. Seda Demiralp has been asked for her “comments on the idea of using US election discourses (such as town hall, debate) in English learning and practice materials to serve political literacy.” Seda Demiralp (personal communication, Nov 25, 2023) responded “I guess this falls into the field of education and science. But personally, of course, it would be beneficial for the students who come to us to have not only general knowledge of English but also to be familiar with the concepts of Political Science. However, if the instructors from whom they will learn these concepts in the preparatory course are not political science instructors, this may present other problems/drawbacks. For the dictionary meaning of these concepts will not be sufficient and it may be better for them not to know a concept at all than to start the chapter knowing it independently of context, incorrectly or incompletely. So, it is not an easy question. Let us say it is a tight road to walk.”



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### APPENDIX

Job Groups	Number
digital salesman	1
surface warfare officer	1
former precinct captain	1
library assistant	1
special education nonprofit.	1
manufacturing	1
church minister	1
photographer and former journalist	1
an artist and the vice chair	1
vice president of a local technology firm	1
a Spanish language translator	1
high school principal	1
she works for a defense contracting firm	1
she works in banking	1
a legal advocate and community organizer	1
someone who hopes to go to graduate school	1
an accountant for the office of the state treasurer	1
a lawn maintenance contractor	1
at a public library	1
as the dean of international studies	1
the executive director	1
the vice president	1
grandmother of a child with a developmental disability	1
a corn and soybean farmer	1
a doctor	1
a communications consultant	1
the assistant director	1
in financial services.	1
a speech therapist	1

developmental psychologist	1
freelance writer	1
a mother of two boys.	1
geologist	1
she works in advertising for a nonprofit right	1
a stay-at-home mom	1
an online talk show host who is active in Democratic politics	1
she works in marketing with technology startups	1
a research analysts	1
a speech-language pathologist	1
he owns a hair salon	1
who's a professional artist and designer	1
a professional singer	1
an interior designer, and the volunteer leader of Moms Demand Action	1

## CHAPTER 2

# QUALITY CULTURE AND QUALITY SYSTEM STANDARDS IN EDUCATION

FETHI KAYALAR<sup>1</sup>

### 1. INTRODUCTION

Increasingly difficult competitive conditions in the world make continuous improvement and perfection of quality inevitable. However, quality improvement efforts can be successful in cultures with appropriate values, beliefs and behaviours. Otherwise, all efforts, resources and time will be wasted. In short, in order to improve quality, a corporate culture that will allow this, quality culture, is a prerequisite.

Quality culture is a fully integrated social and cultural system. In this system, all employees talk to each other and their managers and are informed about the tools used to improve quality. It is possible to solve complex problems in the most appropriate way. One of the most important structural elements in determining corporate culture is internal and external customers. The reason for this is not the marketing belief to meet the needs of the customer, but the industrial economies that determine the customer's future desires and therefore the direction in which the culture will change. Companies are trying to adapt to these changes with various strategies: increasing the added value created by each employee and gaining competitive advantage by improving quality. At the center of quality-oriented strategies is the customer (internal and external).

Embedding the Quality Management System into the company culture can be achieved not by structural change, but by cultural change, which means changing attitudes, behaviours and values. The most reliable source showing the success of the change is customer (internal and external) feedback. All efforts to learn quality-related values as a company develops its capacity to survive in the external environment and manage its own internal affairs express the quality culture of that institution. It takes time for an organization's culture, which is a set of values shared by all individuals, to reach a certain depth and requires continuous training and team learning.

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To understand the concept of educational quality culture, the concept of culture, the concept of quality, and the concept of quality culture which then becomes the concept of educational quality culture must be understood well.

## **2. EDUCATIONAL QUALITY CULTURE**

### **2.1. Cultural Concept**

There are almost 160 definitions of culture in various cultural anthropology literature, as explained by Kroeber and Kluckhohn (1952) in their monograph entitled *Culture: A Review of Concepts and Definitions*, among these definitions are as follows:

Bronislaw Malinowski (1961) defines it as “culture obviously is the integral whole consisting of implement and consumers' goods, the constitutional charters for various social groupings, of human ideas and crafts, beliefs and costumes”, and culture is the integral whole of human life consisting from various equipment and consumer goods, various regulations for social life, ideas and results of human work, beliefs and habits”

According to Edward B. Tylor (1871), *Culture or Civilization* in that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society. Culture or civilization is a comprehensive complexity consisting of knowledge, belief, art, morals, law, customs and various other capabilities and habits that a human acquires as part of a society.

As Melville Herskovits (1972) states, it is a construct describing the total body of belief, behavior, knowledge, sanctions, values, goals that make up the way of life of a people” (culture is a framework of thought (construct) that explains beliefs, behaviour, knowledge, agreements, values, goals, all of which form a way of life of a group of people.

From these definitions, it can be concluded that culture is an integral whole of human life consisting of knowledge, beliefs, art, morals, law, customs and various other capabilities, such as equipment, consumer goods, various regulations for social life, ideas. -ideas and results of human work, with the aim of forming a way of life of a group of people.

### **2.2. Quality Concept**

According to Sallis (2002), quality is understood as something absolute, such as a beautiful face, a magnificent building and so on. This means that quality is an ideal that cannot be compromised, because quality is part of a very high standard and cannot be surpassed. Quality can also be understood as something

relative, seen as something inherent in a product that meets the needs of its customers, quality which is understood by a relative definition, can mean that a product or service will be considered quality not because it is expensive and exclusive, but if The product or service can make customers satisfied, for example it has the value of product authenticity, reasonableness and familiarity. Meanwhile, according to Juran (1999), it is the suitability of product use (fitness for use) to meet customer needs and satisfaction or quality as conformity to specifications.

Deming (1982) states that quality is conformity with market needs or quality is whatever the consumer needs and desires.

According to Philip B. Crosby (1980), quality is conformance to requirements, namely in accordance with what is required or standardized or quality as zero defects, perfection and conformity to requirements. Feigenbaum (1993) also tries to define that quality is full customer satisfaction.

### **2.3. Quality Culture**

From the descriptions of culture and quality, it can be concluded that the concept of quality culture is an integral whole of human life consisting of knowledge, beliefs, art, morals, law, customs and various other capabilities, such as equipment, consumer goods, various regulations for people's lives, ideas and results of human work, with the aim of forming a way of life for a group of people to achieve set standards, satisfy customers, and avoid product and service failures.

Quality culture is an organizational value system that produces an environment that is conducive to the formation and continuous improvement of quality. It is so important in an organization that it receives special attention. These indicators are very important:

- Behavior in accordance with the slogan;
- Input from service users is always requested and used to continuously improve quality;
- Employees are involved and empowered;
- Work is carried out in a team;
- Executive level managers are included and involved (responsibility is not delegated);
- Adequate resources are provided wherever and whenever needed to ensure continuous quality improvement;
- Education and training are provided so that employees at all levels have the knowledge and skills needed to continuously improve quality;

- The reward and promotion system is based on contributions to continuous quality improvement;
- Coworkers are seen as internal customers; and
- Suppliers are treated as work partners

#### **2.4. Concept of Educational Quality Culture**

According to Gilmer (1966) organizational climate is the characteristics that differentiate an organization from other organizations and influence the people in it. Meanwhile, according to Litwin and Robert (1968) organizational climate is a series of measurable characteristics of the work environment which are based on the perceptions of a group of people who live and work in that environment and are shown to influence behaviour. Organizational culture can be summarized as a system of values, beliefs, assumptions or norms that are applied, agreed upon and followed by organizational members as a guide for behaviour and the solution of various problems.

In the context of education, quality culture is a set of systems of values, beliefs, assumptions, or norms that have been applied in education, agreed upon and followed by citizens in educational institutions as guidelines. Because a strong education quality culture is very significant in supporting educational goals to achieve excellence, conversely a weak education quality culture will hinder achieving the goals.

The elements of organizational climate are leadership, motivation and job satisfaction for all organizational stakeholders. According to Hoy & Miskel (2001) there are three levels of organizational climate relation to education, namely:

1. *Institutional level*: related to the environment of educational institutions, where the institution can overcome its environment by strengthening the integrity of educational programs, so that teachers are protected from irrational demands from both students and their parents.
2. *Administrative level*: related to the managerial function of the organization, where this is demonstrated by the attitude of the leadership of the educational institution which is friendly, supportive, open, and in accordance with existing norms.
3. *Teacher Level*: related to the teaching and learning process, this consists of two things: Teacher Affiliation and Academic Attention.

Teacher Affiliation: feelings of teacher friendship and brotherhood as well as strong ties to the school. The teachers feel comfortable with the school environment.

Academic attention: schools are directed at achieving academic achievements and can be achieved by students. This needs to be created with a regular learning environment, teachers believe in students' ability to excel and students study hard to get good academic achievements.

Furthermore, the characteristics of inadequate educational institutions are:

- The institutional environment is easily attacked by destructive external forces
- Teachers and administrators are assaulted by parents' irrational demands
- Low institutional integrity
- Leaders are less effective and provide little direction and are less able to influence
- Teachers don't like their colleagues and their work
- Closeness and brotherhood between weak teachers
- Teaching materials and supporting materials are not available
- Attention to academic achievement is very minimal
- Students who excel are less appreciated and even seen as a threat by teachers,

Thus, the climate of an educational institution is the total quality of the environment in an educational organization. The forms of school organizational climate are: The open – closed model; Healthy – sick schools; Comprehensive assessment of the school environment; Pupil Control Ideology.

Each organization has its own uniqueness, this uniqueness can be a characteristic of excellence in that organization, among several characteristics in an organization are the primary values it has, if these primary values can be packaged well as a guide to acting and working in the organization, then the organization can become a positive organizational culture.

## **2.5. Implementation of a Culture of Quality Education**

The implementation of a quality culture in an organization, including educational institutions, can be carried out as Socialization, Empowerment Culture, Empowerment as Cultural Change, and Role of Interpersonal Intervention in Empowerment

### *2.5.1. Socialization*

The strategy for implementing a culture of quality in educational institutions can be carried out through socialization, in this strategy institutional leaders can carry out cultural manipulation actions by directing all madrasah residents to make positive contributions and not have a negative influence.



Socialization is a process of transforming citizens to participate effectively in the quality culture of the schools, so that they can integrate the goals of the schools with the goals of the community through the stages of communication, interaction and participation. Socialization can involve micro and even macro issues.

#### *2.5.2. Empowerment Culture*

The rapid changes in the global environment affect all fields, including educational institutions, these conditions give rise to action-reaction patterns for organizations including educational institutions to carry out transformations, the need for transformation to achieve competitive advantage can be carried out through structural and cultural transformations, but citizens must understand these transformations thoroughly, detailed and in-depth, so that changes can be made effectively, efficiently and avoid being counter-productive.

#### *2.5.3. Empowerment as Cultural Change*

Empowerment as an effort to make cultural changes can work effectively if it is communicated to all students and educational staff, so that it can increase productivity, develop an attitude of responsibility, and delegate greater authority to all students and educational staff.

#### *2.5.4. The Role of Interpersonal Intervention in Empowerment*

Empowerment is basically personal interaction that provides mutual benefits based on an attitude of understanding, openness, honesty and mutual need between leaders and all members of the organization to make continuous improvements in service and productivity to consumers. To carry out empowerment effectively, quickly and detectably, empowerment can be carried out using resources from within the organization itself.

### **3. QUALITY SYSTEM STANDARDS**

Among the various important factors in the appearance of a school is the quality of services resulting from its services, resources, output and outcomes. Quality can be something abstract and can be simplified to become concrete. Abstract school qualities include reliable resources, the best graduates, skilled teachers, adequate facilities and so on. Quality can also be simplified by following a concrete definition, because there are several accompanying indicators, such as national standard schools with accompanying indicators. All these definitions of quality boil down to customer satisfaction.

The quality standards used by schools should be determined from the beginning of their establishment, so that the quality of the school can be measured. Quality system standards in educational institutions must be in accordance with the needs of the times faced, with specifications or standards (National or International) according to the selected standards and with applicable legal provisions, and fulfil the needs of service users,

Efforts made by school management to achieve the set standards include efforts to achieve, maintain and improve the quality of its services, resources and graduates, to provide confidence to school staff and students that the desired quality is achieved, maintained and improved, and to convince school service users that the expected quality can be achieved. These three efforts must be coordinated in depth, continuously and consistently, so as to produce a quality education strategic plan, because the planning, implementation, evaluation and follow-up processes are carried out through market research, service development engineering, procurement of goods, services and resources, planning and development, processes, supervision and evaluation, standard operating procedures, and determining graduation.

To achieve better change and development, the main factor is top management commitment, because the highest authority and the heaviest responsibility rests on their shoulders, the top leader's commitment to making better change needs to get support balanced with the leader's attitude to always demonstrate appropriate behaviour and activities in line with the organization's vision.

#### **4. CONCLUSION**

Quality System Standards are of great importance to build up effective schools and successful education process. To achieve these standards, classrooms, workshops and laboratories must have the necessary equipment. It must take into account the needs for technological development and specialization.

Feedback should be obtained from management, as well as staff and students, that reference material (library, user manuals, etc.) and access to it are adequate. There needs to be evidence, including feedback from staff and students, that sufficient and appropriate equipment is available. The selected measurement-evaluation materials must be visible from the quality assurance records required by the qualification.

Review records must be available regarding the consistency of student competencies and assessment decisions. Evidence of student achievement through assessment processes and samples of assessed work should be kept securely for quality assurance processes. There needs to be evidence confirming internal and/or external quality assurance processes.

There must be evidence that assessors have appropriate competence and competence in the professional field. In quality assurance and performance monitoring and evaluation records, assessors must demonstrate that they are competent in the assessment used for qualification.

Assessors' knowledge of competency standards, procedures and documentation should be evident from quality assurance and performance assessment and evaluation records. There needs to be evidence, including staff feedback, that assessors' training needs are being identified and met.

As for students, in addition to providing feedback to each student on their own performance, regular evaluations should be conducted to provide staff and administrators with feedback on students' progress and the effectiveness of the teaching and learning methods used. As students continue the programme, individual assessments should enable them to propose necessary and practical changes to their educational plans. Additionally, students should receive support towards the end of their programs in preparing for the next step.

The process of collecting information about each student's strengths, difficulties, wishes and needs should be carried out in cooperation with experts, taking into account the individual's opinions. This process should enable students to begin an appropriate program that will enable them to achieve significant and realistic goals (for example, improving their skills, competing more effectively in the job market, and progressing to other education and training programmes).

It is important that all students have access to the institutional complaints procedure. This procedure should be supported by a documented policy that demonstrates receptivity to student comments and complaints and outlines the grounds and validity period for the complaint. In order for the indicators to be met, there must be a documented complaint policy and the procedures and documents related to this policy must be easily accessible by all students.

Everyone should be provided with a safe and healthy learning and working environment. The organisation's facilities and equipment must comply with the latest occupational health and safety legislation. Therefore, this standard aims to ensure that the institution is aware of its responsibilities towards all its students, staff, all interested parties and visitors to the institution.

It is important that staff and students receive education in a safe environment. Paying attention to health and safety issues not only increases the morale and performance of staff and students, but also builds trust in the institution.

All activities must be carried out in an environment where potential hazards are properly identified, risks are minimized by establishing safety procedures, and safe working practices are followed in all education and training programs. To meet the indicators, the organization must operate an appropriate security

management system. All subcontractors providing education, training and work placements must also work in accordance with health and safety guidelines for facilities, equipment and materials for all their users.

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## CHAPTER 3

# INTEGRATED QUALITY MANAGEMENT IN EDUCATION

FETHI KAYALAR<sup>1</sup>

### 1. INTRODUCTION

The effort to raise qualified people with certain abilities is among the important problems for all educational institutions. Especially in these days when all countries are opening their doors to each other, having certain standards in education provides important privileges. In order to ensure standards in education, it is necessary to establish a certain functionality within the system. In order to ensure this operability, the total quality application in education must be implemented as soon as possible. In today's world, where all countries have started to integrate and work together, the youth trained in educational institutions will undertake important tasks in establishing the system of tomorrow. The youth will have the knowledge and skills to meet the needs of changing societies. Their training imposes important responsibilities on educational organizations (Taş, 2023).

Education can be defined as a society's attempt to control its future by recreating the people it has. The formal organization of education, which is a social institution, is the school. The most important and obvious feature of the organization we call school is that the raw material it works on is people coming from and going to society. School is an open social system whose individual dimension is more sensitive than its institutional dimension, its informal side is heavier than its formal side, and its sphere of influence is wider than its jurisdiction. School is an organization where various values exist and sometimes conflict. The difficulty of evaluating the product is another feature of the organization called school. Because the aims of the school are more complex and conflicting than other organizations. Since education is generally an indirect initiative, a special environment called a school has been created for this purpose. The school is either directed by all the formal and informal organizations in the environment or The school provides human resources to all other organizations. The school is one of the leading organizations that provide cultural change. Like every organization, the school, which has a unique personality, shows the

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characteristics of a bureaucratic organization. Due to these features, it is seen that educational organizations differ from other organizations. These features should be taken into consideration when applying Quality Management to educational organizations.

Quality Management is formed by the organization's desire for quality. When the organization sees its profit and efficiency in the increase in the number of customers who are satisfied with its products, it has to change its production processes according to this understanding. Features such as creating a team spirit in the organization, making decisions based on data, honesty and not making mistakes are always. It forms the basis of all kinds of relationships. Many studies are being carried out to improve the field of education. However, in order for these studies to be successful, they must be very systematic and oriented to the needs of the contemporary world. Studies and searches for quality in education are as important for the present and future world as they were in the past.

Different definitions of quality include the suitability of education for its intended use and the fulfillment of the demands of customers, including students and the business world who await graduates. When we adapt the definition of the concept of quality to educational organizations, the following definition can be made. Quality in education is to meet the needs and expectations of customers, consisting of students and the business world, effectively, appropriately and in the most economical way at every stage of educational activities and in all elements affecting the educational process.

As in all organizations, it is difficult to implement a new system in quality organizations without a leader. This is especially important for educational organizations. Considering the power of influence on the group, it is important for educational organizations to eliminate various obstacles encountered, to motivate teachers, students and staff and to establish common ground. It definitely needs a well-trained, strong educational leader to determine the vision.

## **2. EDUCATIONAL QUALITY MANAGEMENT**

To clarify the meaning of management, below are quoted several definitions of management. The following opinions differ from each other even though there are elements of similarity. From differences of opinion, which are caused by differences in placing emphasis on points of view, and similarities, it is hoped that a clearer and more comprehensive view of management can be obtained (Terry, 1972).

Management is a unique process consisting of planning, organizing, activating and controlling actions carried out to determine and achieve predetermined targets through the use of human resources and other sources (Stoner, 1995).

Management is the process of planning, organizing and using other organizational resources to achieve predetermined organizational goals. Management is the art of achieving goals through the efforts of other people (Appley and Lee, 2010). As an art and science, in management, there are strategies for utilizing the energy and thoughts of other people to carry out activities directed at achieving predetermined goals, in management there are techniques that are rich in leadership values in directing, influencing, supervising and organizing all components that support each other to achieve a goal (Siagian, 2019). Management is the ability or skill to obtain results in order to achieve goals through the activities of other people.

From these descriptions, it can be said that management occurs within an organization and there are always certain goals that will be achieved. Achieving these goals involves humans and other resources. To achieve the goal, it is carried out through certain stages of activities or processes. Achievement of goals involving humans and other resources is carried out in the most efficient way. Management can be said to be something that is intangible and can only be seen from the results. It is a tool to achieve goals, not an end. As management is applied or occurs in every organization, the term management is applied broadly. For example: university management, personnel management, financial management. Management is a systematic, coordinated and cooperative process in efforts to utilize resources. It can be called both a science and an art. Everyone is actually involved in management activities, there is no one who is not involved in an organization (Muhith, 2017).

## **2.1. Functions of Management**

Management has a lot of functions such as planning, organizing, leading, directing, motivating, coordinating, controlling, evaluating, reporting, staffing, budgeting, acting and forecasting.

*Planning* is determining a series of actions to achieve the desired results. Actions to be achieved include:

- 1) What must be done?
- 2) Reasons why you should act?
- 3) Where should the action take place?
- 4) When should this action be taken?
- 5) Who will complete the action?
- 6) And how to do it?

*Organizing* is a structured collaboration between two or more people to achieve certain goals, with stages as

- Recruitment of resources to meet plan implementation needs;



- Grouping and dividing tasks to make the organization structured and orderly;
- Establishment of an authority structure and coordination mechanism;
- Determining work methods and procedures;
- Providing, training and providing staff information;

*Leading* is an activity of making decisions, communicating for mutual understanding, encouragement, providing inspiration for action, and selecting people to become members of the group by improving their knowledge and attitudes so that they can become skilled in achieving the expected goals.

*Directing* is an effort to provide guidance, advice, orders or instructions to subordinates in carrying out their duties, so that they can carry out their duties as well as possible and in accordance with the goals that have been set.

*Motivating* is an activity that provides inspiration, enthusiasm and encouragement to all employees according to the goals that have been set.

*Coordinating* is one of the management functions to carry out various activities to avoid chaos, disputes, gaps in activities, by connecting, unifying and aligning the work of all employees so that they can work together to achieve the goals that have been set.

*Supervising* is an assessment activity, correcting everything that has been done by employees, so that improvements can be made towards the right path according to the goals that have been set.

*Evaluating* is an activity of assessing all activities to find indicators of the causes of success or failure of the activity, so that it can be used as a study for the next activity.

*Reporting* is the delivery of developments in the results of activities and matters relating to duties and functions to higher officials.

*Staffing* personnel in an organization starting from recruitment, development and promotion, so that every employee can be useful in the organization.

*Budgeting* is an activity of planning financing, sources of costs, how to use them, implementing activity financing, bookkeeping patterns, accountability and supervision.

*Acting* is an activity to mobilize and encourage employees to carry out their duties and obligations.

*Forecasting* is projecting and estimating various possibilities that will occur before a more definite plan can be carried out.

## **2.2. Educational Management**

Education is a planned activity to achieve certain goals, namely developing the potential of students so that they can have the strength of their beliefs, identity, intelligence, good moral character, and play an active role in society.

From the description of management above, educational management is the entire process of joint activities in the field of education by utilizing all existing facilities, both personal, material and spiritual, to achieve educational goals. Educational management is an activity of integrating various educational resources so that they are concentrated in an effort to achieve the educational goals that have been previously determined". Educational management is the activity of combining various educational resources so that they are focused on achieving predetermined educational goals.

According to Kneziech (1984), Education Management is a collection of organizational functions which have the main objective of ensuring the efficiency and effectiveness of educational services, such as implementing policies through planning, decision making, leadership behavior, preparation of resource allocation, stimulation and coordination of personnel and a conducive organizational climate.

Educational management is a field of applied science that discusses the context of the educational sector. In a journal written by Tua and Gaol (2020), stated that educational management is a scientific discipline, educational management science is associated with a field and not a form of knowledge. It is stated that educational management is a field of study and practice that is related to the operation of educational organizations, including administration, finance, bureaucratic responsibilities of school leaders. Emphasis on scientific and practical aspects is the main key in understanding the concept of educational management. The emphasis in the field of educational management includes the application of management principles, concepts, functions and theories in its implementation. Education management is all activities related to those in schools including large businesses, such as regarding the formulation of school security, directing large businesses, coordination, consultation, correspondence, equipment control, and so on. According to Usman (2014), educational management is the art and science of managing related educational resources to create a learning atmosphere and learning process that is better than before so that students can actively develop their potential, this is done to have religious spiritual strength, self-control, personality, intelligence, noble morals, and skills needed by himself, society, nation and state.

From the opinions of the experts above, Educational Management is an activity or series that contains the process of managing collaborative efforts of

several people who are members of an educational organization that has predetermined educational goals, by utilizing available resources owned by the organization and uses management functions to achieve goals effectively and efficiently

### **2.3. Scope of Education Management**

According to Fattah, educational management is a tool used to achieve educational goals through processing various educational fields. The areas worked on by educational management include all activities that lead to activities that support the process of teaching and learning activities in order to achieve predetermined educational goals. According to Baharuddin, the scope of education management includes the following:

#### *2.3.1. Curriculum Management*

Curriculum Management is a set of plans and arrangements regarding objectives, content and learning materials used in implementing guidelines for implementing learning activities in achieving educational goals effectively and efficiently. Curriculum management is a system that processes or organizes the curriculum in a cooperative, comprehensive, systemic and systematic manner, which is used as a reference for educational institutions in order to realize curriculum goals or educational objectives. The most important curriculum management activities are (a) activities which are closely related to the teacher's duties and (b) activities which are closely related to the learning and teaching process. (Kristiawan & Bengkulu, 2017).

#### *2.3.2. Personnel Management*

Personnel management is a series of cooperative activity processes consisting of planning, organizing, mobilizing and supervising in the field of personnel by utilizing existing resources effectively and efficiently so that all school personnel provide their best efforts in optimizing the achievement of predetermined educational goals.

School personnel include teachers and other employees. School personnel can be divided into educational and non-educational personnel. a) educational personnel consist of teaching staff, educational unit managers, inspectors, supervisors, researchers and developers in the field of education, librarians, laboratory assistants, learning resource technicians and teachers; b) teaching staff consisting of supervisors, teachers and trainers; and c) the management of the education unit consists of the principal, director, chairman, rector and leader of the out-of-school education unit. (Kristiawan & Bengkulu, 2017).

### *2.3.3. Student Management*

Student management is an effort to organize students from the first time they enter school until they graduate from school, by providing the best possible service to students. The aim of student management is to organize student activities with the aim of supporting the learning process so that it can run smoothly, orderly and regularly and can contribute to achieving the set goals. The function of student management is as a means for students to develop their abilities and be able to perform optimally, both in terms of individuality, social, aspirations, needs or potential.

### *2.3.4. Facilities and Infrastructure Management*

Facilities and infrastructure management is an activity that organizes and manages educational facilities and infrastructure efficiently and effectively in achieving predetermined goals. In general, the process of facilities and infrastructure management activities includes planning, procurement, supervision, inventory storage, deletion and arrangement. This process is important so that the procurement of facilities and infrastructure is right on target and effective in use.

### *2.3.5. Financial management*

It is a series of activities that plan, implement and evaluate as well as a field that is accountable for all matters related to fund management in a transparent manner to the community and government. Good financial management in an institution will increase the efficiency of providing education. With the availability of funds, achieving educational goals that are more productive, effective, efficient and relevant will provide what the institution needs. As for financial and financing sources in a school, in general they can be grouped into three parts, namely a) government, both central government and regional government, which are general or specific and intended for educational purposes; b) parents or students; and c) society whether binding or not.

### *2.3.6. Administrative Management*

Administration in management science has an important role as one of the management activities that can see the future. This means that administration can be interpreted as management activities that are able to see future conditions and have preparations to face them. The manifestation of the relationship between administration and educational management can be seen from the activities of the school principal as someone who makes decisions and is fully responsible for the

policies he makes. Educational Administration can be classified into several sections such as administration of school management;

personnel administration of teachers and school employees; student administration; administration of teaching supervision; administration of curriculum implementation and development; administration of the establishment and planning of school infrastructure; and school relations with the community.

### *2.3.7. Public Relations Management*

Public relations is a management function that has a role in assessing and summarizing public attitudes, adjusting security and organizational procedures to gain public understanding and support. Public relations activities in schools do not only provide information regarding school activities, but also must convey several things including a) report on opinions developing within the community regarding educational issues, b) assist the Principal with his efforts to obtain assistance and cooperation, c) develop plans regarding ways to obtain assistance from outside or within the school, and d) assist leaders because their duties cannot directly provide information to the public or parties who need it.

To carry out these tasks, efficient Public Relations must pay attention to the following principles.

- a) Objective and official, the information released must not conflict with policies that have been established and implemented. The news conveyed must be official facts from the agency or institution concerned
- b) An orderly and disciplined organization, public relations will function if the organization's tasks run smoothly and effectively and have relationships between the outside and inside environment.
- c) The information provided must encourage the desire to participate or provide support to the community.
- d) Continuity, public relations information must strive so that the public obtains information consistently according to their needs.
- e) The response that arises among the public is feedback from the information conveyed which must receive full attention.

### *2.3.8. Special Services Management*

A special service is an effort that is not directly related to the teaching and learning process in the classroom, but is an activity provided by the school to its students so that they can be more optimal in carrying out the learning process. The types of special services in educational institutions consist of:

- a) *School library*, the library at a school is managed entirely by the school concerned with the main aim of helping the school to achieve specific goals and educational goals in general;
- b) *School Health Business (SHB)*, it is a vehicle for improving the ability to live a healthy life, which in turn produces optimal health status for students;
- c) *Cafeteria/Stall/Canteen*, the aim of providing a school canteen is to provide a place to shop for food that guarantees cleanliness and nutritious food.

### **3. QUALITY**

#### *3.1. Quality Concept*

According to Sallis (2002), quality in everyday conversation is mostly understood as something absolute, for example expensive restaurants and luxury cars. As an absolute concept, quality is the same as good, beautiful, and true, it is an idealism that cannot be compromised. In an absolute definition, something of quality is part of a very high standard and cannot be surpassed. Meanwhile, relative quality is seen as something inherent in a product that meets customer needs. For this reason, in this relative definition, a product or service will be considered quality, not because it is expensive and exclusive, but because it has value, for example product authenticity, reasonableness and familiarity.

Meanwhile, according to Juran (1999), quality is the suitability of product use (fitness for use) to meet customer needs and satisfaction or quality as conformity to specifications. Meanwhile, Deming (1982) stated that quality is conformity with market needs or quality is whatever consumers need and want. It is stated that quality is conformance to requirements, namely in accordance with what is required or standardized or quality as zero defects, perfection and conformity to requirements.

Although there is no universally accepted definition of quality, there are several similarities between the existing definitions. This means that defining quality requires a comprehensive view. There are several elements that mean something is said to be of quality, namely:

- a) Quality includes efforts to meet or exceed customer expectations;
- b) Quality includes products, services, people, processes, and the environment;
- c) Quality is an ever-changing condition and
- d) Quality is a dynamic condition related to products, services, people, processes and environments that meet or exceed expectations.

Quality in conventional management literature, especially industry, has very varied meanings or definitions depending on the perspective used, criteria and

context, one example is Juran's (1999) statement, which states: *“quality” means those features of products which meet customer needs and thereby provide customer satisfaction.* In this sense, the meaning of quality is oriented to income. The purpose of such higher quality is to provide greater customer satisfaction and, one hopes, to increase income. However, providing more or better quality features usually requires an investment and therefore usually involves increases in costs.

From this statement it can be concluded that the definition of quality really depends on the perspective used in framing the output. In defining quality, there are several main experts who have different opinions, but the meaning is the same and remains the correspondence between ideas, ideals and practice. So the concept of quality is often considered as a relative measure of perfection or goodness of a product or service, which consists of design quality and conformance quality. In another perspective, some call quality a slippery concept, because quality is related to the perspective and interests of the user of the word. This happens because the concept of quality departs from absolute and relative standards. Absolute standards assume that something of quality is part of a very high standard and cannot be surpassed and has ultimate truth; while relative standards are seen as something inherent in a product that is in accordance with customer needs or is able to adapt to specifications and is also able to meet customer needs.

### *3.2. Quality of Education*

In the world of education, it was conceptualized that quality is defined as product and service standards as well as customer standards (Sallis, 2002). Product and service standards mean quality education if the services and products conform to specifications, suit the objectives and benefits, are without defects and are always good from the start. Meanwhile, what is meant by customer standards is that educational services and products can be said to be of high quality, if they can satisfy customers by meeting their needs and pleasing them. When quality is included in the education framework, the framework used is still plural. One example is that education quality is the ability of educational institutions to manage operationally and efficiently the components related to schools so as to produce value (Dazaujak, 1996). There are also those who define educational quality as the ability possessed by products or services that can meet the needs or expectations, satisfaction of customers, namely internal customers, namely students as learners and external customers, namely society and the industrial world (Fatah, 2012).

On the other hand, there are also those who use another perspective, namely that the meaning of educational quality can be seen from two sides, namely the normative aspect and the descriptive aspect. In a normative sense, the quality of education is determined based on intrinsic and extrinsic considerations (criteria). Based on intrinsic criteria, the quality of education is a product of education, namely educated humans, in accordance with ideal standards. Based on extrinsic criteria, education is an instrument for educating a trained workforce. In a descriptive sense, quality is determined based on actual conditions. For example, the results of a learning achievement test. Thus, quality education is education that is capable of carrying out the process of maturing the quality of students which is developed by freeing students from ignorance, incompetence, helplessness, untruth, dishonesty, and from bad morals and faith (Mulyasana, 2011).

From this description it can be concluded that the quality of education is the quality of education which refers to input, process, output and impact. The quality of input is everything that needs to be available because it is needed for the educational process to take place. The quality of this educational input can be seen from several sides. *First*, whether the input of human resources is good or not, such as managers of educational institutions who have a vision and mission and are capable, teachers and students; *second*, whether or not the criteria for material input in the form of educational infrastructure and learning media are met; *third*, whether or not the software input criteria are met, such as regulations, job descriptions, and educational organizational structure; and *fourth*, the quality of input in the form of hopes and needs, such as vision, motivation, perseverance and ideals. Meanwhile, the quality of the learning process means the ability of educational resources to transform various types of input and situations to achieve a certain degree of added value for students.

#### **4. CONCLUSION**

Quality of education can be said to be the degree of excellence in managing education effectively and efficiently to produce academic and extracurricular excellence in students who are declared to have passed one level of education or completed a certain learning program. Likewise, it can be stated that quality is often defined in terms of outcomes to match a customer's satisfaction; where this definition can be correlated with these limitations which boil down to the limitation that the quality of education is satisfaction with graduates of quality educational institutions and also from good educational institution services as well. So, the measure of educational quality lies in the satisfaction of educational consumers in using the output or outcomes of the educational institution. On the



other hand, the services provided by educational institutions to consumers also become a standard for the level of educational quality.

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## CHAPTER 4

# INVESTIGATION OF STEM ATTITUDE OF SECONDARY SCHOOL STUDENTS IN TERMS OF VARIOUS VARIABLES

**DİDEM ALSANCAK SIRAKAYA<sup>1</sup>**

**MUSTAFA SIRAKAYA<sup>2</sup>**

### <sup>1</sup>INTRODUCTION

The social structure has undergone a transformation, leading to a transition from an industrial society to an information society. The primary objective of information societies is the generation of knowledge. The generation of knowledge is achieved through education. STEM education, which stands for science, technology, engineering, and mathematics, has been a commonly employed approach in educational settings in recent times. STEM is an educational curriculum that focuses on teaching pupils in four specific disciplines: mathematics, technology, science and engineering. It takes an interdisciplinary and practical approach to learning. Instead of instructing the four subjects individually, the approach relies on a cohesive learning paradigm centered around practical, real-world implementations (Hom, 2014). STEM applications strive to integrate the science, technology, engineering, and mathematics disciplines that are the foundation of the STEM method rather than teaching them separately. This approach emphasizes the interconnectedness of these subjects in order to provide more comprehensive and cohesive instruction. STEM education facilitates the application of theoretical knowledge to practical, real-life situations by instructing students in the fields of these four disciplines. STEM education is an instructional method that encompasses the integrated teaching of mathematics, science, engineering and technology throughout all educational levels, including preschool (Akgündüz et al., 2015). Education of STEM seeks to facilitate students' acquisition of knowledge in a comprehensive

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and structured manner (Breiner, Harkness, Johnson, & Koehler, 2012; Labov, Reid, & Yamamoto, 2010; Morrison, 2006) by enabling them to learn and solve real-world problems that they will encounter in the future (Capraro & Slough, 2008; Sweller, 1989). This methodology facilitates individuals in resolving everyday life issues by establishing a correlation between mathematics, science, engineering and technology (Dugger, 2010) and empowers them to amalgamate, scrutinize, interpret, and synthesize natural occurrences (Wang, 2013). STEM education seeks to equip students with essential abilities for the modern period, including problem-solving, logical reasoning, effective communication, critical thinking, and media literacy (Bybee, 2010).

The objective of STEM education is twofold: to enhance proficiency in the subject areas and to foster economic prowess and global competitiveness among nations. The shift from the industrial era to individual production has led to a demand for different skills and abilities from individuals in today's society. STEM education has become an essential requirement for all nations worldwide. The shift from relying on physical labor during the industrial revolution to emphasizing manufacturing skills and cognitive abilities in industrialized countries has highlighted the importance of STEM education. Contemporary people are required to possess the abilities of creativity, critical thinking, problem-solving, and collaboration. The significance of STEM education in shaping the next generation becomes evident when considering its positive impact on students' self-confidence, problem-solving abilities, inventiveness, and critical thinking skills (Morrison, 2006; Wai, Lubinski, & Benbow, 2010). This technique also facilitates the development of abilities such as critical thinking, holistic thinking, and business acumen (Corlu, Capraro, & Capraro, 2014; Yamak, Bulut, & Dündar, 2014). The positive attitudes of students towards STEM play a crucial role in acquiring the skills that are the focus of STEM education. Furthermore, it is crucial to assess STEM attitudes in order to implement effective strategies that will enhance and facilitate students' acquisition of knowledge in these subjects (Tseng, Chang, Lou, & Chen, 2013). The objective of this study is to ascertain the attitudes towards STEM among students in secondary schools and analyze them in relation to different variables.

## **METHOD**

### ***Research Design***

The research was designed in the survey model. Survey researches are conducted to reveal the attitudes, characteristics, expectations, beliefs, etc. of a segment (Creswell, 2012). It is aimed to determine the existing situation related

to the subject as it is (Büyüköztürk, Kılıç Çakmak, Akgün, Karadeniz, & Demirel, 2008) and it is generally studied on larger samples than other research methods (Fraenkel & Wallen, 2006).

### ***Study Group***

The study group of the research consists of 624 secondary school students attending 2 different secondary schools. Convenient sampling method was used in the study. In the convenience sampling method, the researcher tries to reach the target sample number by starting from the respondents that he/she can reach more easily (Büyüköztürk et al., 2008).

### ***Data Collection Tools***

STEM Attitude Scale: Faber et al. (2013) originally developed the STEM Attitude Scale, which was later modified into Turkish by Yıldırım & Selvi (2015) and employed to assess the STEM attitudes of secondary school pupils. The 5-point Likert-type scale comprises four components, namely mathematics, science, engineering, and 21st-century abilities, with a total of 37 items. The Cronbach alpha coefficient for the entire scale was computed as .94. The Cronbach alpha values for mathematics, science, engineering, and 21st century abilities were .89, .86, .86, and .89, respectively, in the sub-factors.

### ***Analysing the Data***

In the study, descriptive statistics, independent samples t-test and one-factor analysis of variance (ANOVA) tests for independent samples were used. Before using these tests, it was checked whether the parametric test assumptions were met. It was decided to use parametric tests when the sample size was more than 30 (Ross, 2004; Roscoe, 1975, cited in Büyüköztürk et al., 2008) and the data were found to be normally distributed. Various methods are used to examine the normal distribution of the scores obtained from the data. One of these methods is to look at the skewness kurtosis coefficient. Büyüköztürk (2007) states that as long as the skewness kurtosis coefficient remains within the range of  $\pm 1$ , the scores do not show a significant deviation from the normal distribution. Another method used to examine the normality of the distribution is graphical analysis (Büyüköztürk, 2007). In this study, skewness kurtosis coefficient and Q-Q Plot graphical analysis methods were used together. Since the skewness kurtosis values were within the range of  $\pm 1$  and the points in the Q-Q Plot graph were close to the 45-degree normal distribution line (Büyüköztürk, 2007), it was determined that the data were normally distributed. The skewness kurtosis values

and descriptive statistics of the STEM attitude scale and its sub-factors are given in Table 1.

**Table 1:** Skewness Kurtosis Values and Descriptive Statistics

Variable	Min	Max	Mean	N	Skewness	Kurtosis
Attitude to maths	8	40	30,03	624	-,461	-,455
Science attitude	9	45	33,14	624	-,607	-,090
Engineering Attitude	9	45	31,72	624	-,569	-,496
21st century skills attitude	11	55	41,65	624	-,856	-,025
STEM attitude	41	185	136,53	624	-,692	,073

In the analyses where there was a significant difference as a result of ANOVA test, Levene's test was applied to determine which groups this difference originated from. Since it was determined that the variances were not homogeneously distributed in the variables of science attitude, engineering attitude, 21st century skills and STEM attitude, Dunnett's C test was used ( $p < .05$ ), and since the mathematics attitude variable was homogeneously distributed ( $p > .05$ ), LSD test was used (Büyüköztürk, 2007).

## RESULTS and CONCLUSIONS

### *Findings and Results Related to Gender*

The t-test analysis for independent samples was used to determine whether gender played a role in students' STEM attitude total score and subscale mean scores. The test results are given in Table 2.

**Table 2:** Variation of STEM Attitude Total Score and Subscale Score Averages by Gender

Scale	Gender	N	$\bar{X}$	S	sd	t	p
Attitude to maths	Female	300	30,66	6,778	621	2,232	,026
	Male	323	29,43	6,921			
Science attitude	Female	300	34,14	7,444	621	3,003	,003
	Male	323	32,25	8,275			
Engineering Attitude	Female	300	30,47	8,845	621	-3,237	,001
	Male	323	32,90	9,866			
21st century skills attitude	Female	300	42,35	11,059	621	1,514	,131
	Male	323	40,99	11,322			
STEM attitude	Female	300	137,61	27,501	621	,887	,375
	Male	323	135,56	30,121			

When Table 2 was analysed, it was found that the mean mathematics attitude scores of female students ( $\bar{X}= 30,66$ ) were significantly higher than the mean scores of male students ( $\bar{X}= 29,43$ ) ( $t_{(621)} = 2,232$ ,  $p<.05$ ).

It was also found that the mean scores of female students' science attitude ( $\bar{X} = 34,14$ ) were significantly higher than the mean scores of male students ( $\bar{X}= 32,25$ ) ( $t_{(621)} = 3,003$ ,  $p<.05$ ).

It was understood that the mean scores of male students' engineering attitude ( $\bar{X}= 32,90$ ) were significantly higher than the mean scores of female students ( $\bar{X} = 30,47$ ) ( $t_{(621)} = -3,237$ ,  $p<.05$ ).

Although the mean scores of female students' 21st century skills attitude ( $\bar{X}= 42,35$ ) were higher than the mean scores of male students ( $\bar{X}= 40,99$ ), the difference was not significant ( $t_{(621)} = 1,514$ ,  $p>.05$ ).

In terms of the total scores obtained from the STEM scale; although the mean scores of female students ( $\bar{X}= 137,61$ ) were higher than the mean scores of male students ( $\bar{X}= 135,56$ ), the difference was not significant ( $t_{(621)} = ,887$ ,  $p>.05$ ).

### ***Findings and Results Related to Class of Study***

One-way analysis of variance was applied to determine whether there was a difference in terms of students' STEM attitudes measurements and subscale mean scores according to the class of study. The results are presented in Table 3.

**Table 3:** The Variation of STEM Attitude Total Score and Subscale Score Averages According to the Class of Study

Scale	N	Mean	SS	F	p
Attitude to maths	624	30,03	6,87	21,899	,000*
Science attitude	624	33,14	7,94	9,831	,000*
Engineering attitude	624	31,72	9,45	13,226	,000*
21st century skills attitude	624	41,65	11,19	18,133	,000*
STEM attitude	624	136,53	28,86	23,279	,000*

According to the results in Table 3, students' STEM attitude and their scores in all subscales show a significant difference according to the class of study. The results of Post Hoc comparison with Dunnett and LSD test are given in Table 4.

**Table 4:** The Effect of Grade Variable on STEM Attitude Total Score and Subscale Score Averages

Scale	Grade	n	$\bar{x}$	Sd	F	p	Significant difference	
Attitude to maths	5	189	32,40	6,316	21,899	,000	5-6	
	6	133	30,17	6,684			5-7	
	7	135	30,55	6,259			5-8	
	8	167	26,82	6,926			6-8	
							7-8	
Science attitude	5	189	35,31	7,847	9,831	,000	5-6	
	6	133	32,92	7,693			5-7	
	7	135	33,16	6,697			5-8	
	8	167	30,83	8,545			6-8	
							7-8	
Engineering attitude	5	189	33,50	9,717	13,226	,000	8-5	
	6	133	33,01	9,745				
	7	135	32,66	7,720				8-6
	8	167	27,92	9,203				8-7
21st century skills attitude	5	189	44,70	11,002	18,133	,000	5-6	
	6	133	42,31	11,231			5-8	
	7	135	42,95	8,998			6-8	
	8	167	36,60	11,400			7-8	
STEM attitude	5	189	145,91	28,459	23,279	,000	5-6	
	6	133	138,40	29,741			5-7	
	7	135	139,32	21,754			5-8	
	8	167	122,17	28,421			6-8	
							7-8	

According to the results in Table 4, it was found that the mean maths attitude scores of 5th grade students were significantly higher than those of 6th, 7th and 8th grades and the mean scores of 8th grade students were significantly lower than those of 6th and 7th grade students. Similarly, it was found that the mean science attitude scores of 5th grade students were significantly higher than those



of 6th, 7th and 8th grades and the mean scores of 8th grade students were significantly lower than those of 6th and 7th grade students. In terms of engineering attitude, it was concluded that the mean scores of 8th grade students were significantly lower than 5th, 6th and 7th grade students. In 21st century skills attitude, the mean scores of 5th grade students were significantly higher than 6th grade students and the mean scores of 8th grade students were significantly lower than 5th, 6th and 7th grade students. According to the last finding, it was found that the mean STEM attitude scores of 5th grade students were significantly higher than 6th, 7th and 8th grade students, and the mean scores of 8th grade students were significantly lower than 6th and 7th grade students.

***Findings and Results Related to Having Personal Technological Devices***

Whether having a personal technological device plays a role according to students' STEM attitude total score and subscale score averages was analysed by t-test analysis for independent samples. The test results are given in Table 5.

**Table 5:** Variation of STEM Attitude Total Score and Subscale Score Averages According to Having a Personal Technological Device

Scale	Ownership of technological devices	N	$\bar{X}$	S	sd	t	p
Attitude to maths	Yes	456	30,82	6,584	600	3,327	,001
	No	146	28,54	7,392			
Science attitude	Yes	456	33,85	7,809	600	2,432	,016
	No	146	32,00	8,061			
Engineering Attitude	Yes	456	32,31	9,378	600	1,715	,088
	No	146	30,75	9,631			
21st century skills attitude	Yes	456	42,64	10,895	600	2,145	,033
	No	146	40,30	11,617			
STEM attitude	Yes	456	139,62	27,799	600	2,829	,005
	No	146	131,60	30,446			

When Table 5 was analysed, it was found out that the mean mathematics attitude scores of the students who had technological devices ( $\bar{X}$ = 30,82) were significantly higher than the mean scores of the students who did not ( $\bar{X}$ = 28,54) ( $t_{(600)} = 3,327, p<.05$ ).

It was also found that the mean scores of the students who had technological devices in science attitude ( $\bar{X}$ = 33,85) were significantly higher than the mean

scores of the students who did not have technological devices ( $\bar{X}= 32,00$ ) ( $t_{(600)} = 2,432, p<.05$ ).

Although the mean engineering attitude scores of the students who had technological devices ( $\bar{X}= 32,31$ ) were higher than the mean scores of the students who did not ( $\bar{X}= 30,75$ ), the difference was not significant ( $t_{(600)} = 1,715, p>.05$ ).

It was understood that the mean scores of the 21st century skills attitude of the students who had technological devices ( $\bar{X}= 42,64$ ) were significantly higher than the mean scores of the students who did not ( $\bar{X}= 40,30$ ) ( $t_{(600)} = 2,145, p<.05$ ).

In terms of the total scores obtained from the STEM scale, it was understood that the mean scores of the students who had technological devices ( $\bar{X}= 139,62$ ) were significantly higher than the mean scores of the students who did not ( $\bar{X}= 131,60$ ) ( $t_{(600)} = 2,829, p<.05$ ).

***Findings and Results Related to Daily Technological Device Usage Period***

One-way analysis of variance was applied to determine whether there was a difference in terms of students' STEM attitudes measurements and subscale mean scores according to the duration of daily technological device use. The results are presented in Table 6.

**Table 6:** Variation of STEM Attitude Total Score and Subscale Score Averages According to Daily Technological Device Usage Time

Scale	N	Mean	SS	F	p
Attitude to maths	624	30,03	6,873	2,368	,070
Science attitude	624	33,14	7,943	3,419	,017
Engineering Attitude	624	31,72	9,454	2,483	,060
21st century skills attitude	624	41,65	11,199	2,825	,058
STEM attitude	624	136,5352	28,865	2,455	,062

According to the results in Table 6, only the scores of the students in the science attitude subscale show a significant difference according to the daily technological device usage time. Post Hoc comparison results are given in Table 7.

**Table 7:** The Effect of Daily Technological Device Usage Time on Science Attitude Scores

Scale	Daily Technological Device Usage Time	n	$\bar{x}$	Sd	F	p	Significant difference
Science attitude	Less than 1 hour	434	33,77	7,600	3,419	,017	Less than 1 hour-1-4 hours, Less than 1 hour-4-8 hours,
	1-4 hours	144	31,82	8,469			
	4-8 hours	35	30,67	6,452			
	More than 8 hours	11	33,18	14,077			

According to the results in Table 7, the science attitudes of the students who used technological devices for less than 1 hour per day were found to be significantly higher than the students who used them for 1-4 hours and 4-8 hours per day.

## CONCLUSION

In this study, it was aimed to determine whether the STEM attitudes of secondary school students differ significantly according to various variables. For this purpose, STEM attitude scale was applied to 624 secondary school students.

The first result obtained in the study is that STEM attitudes of secondary school students do not differ significantly according to gender. This result can be interpreted as that female and male students have STEM attitudes at a similar level. In the literature, there are studies with similar results indicating that students' STEM attitudes do not differ significantly by gender (Karakaya & Avgın, 2016; Karakaya, Avgın & Yılmaz, 2018; Özyurt, Kayıran, & Başaran, 2018; Wang & Degol, 2017). However, when the subscales were examined, it was concluded that the STEM attitudes of female students were significantly higher than male students in mathematics attitude and science attitude. Karakaya and Avgın (2016), who reached a similar conclusion, mentioned a situation in favour of women only in science attitude among the sub-dimensions of STEM attitude. It was observed that the engineering attitude of men was higher than that of women. In 21st century skills attitude, no significant difference was found according to gender.

As a result of the analyses, it was determined that there was a significant difference in all subscales and STEM attitude according to the grade level of the students. When the mean scores are analysed, it is noteworthy that the attitudes

of the students decrease as the grade level increases. There are studies in the literature that show similarities and differences with this result. The research results of Aydin, Saka and Guzey, (2017) and Unfried, Faber, Stanhope and Wiebe, (2015), Lamb, Akmal and Petrie (2015), who stated that STEM attitudes increase and show a significant difference as the grade level increases, are in parallel with our study. Karakaya, Avgin, and Yılmaz (2018) concluded that there was a significant difference in STEM attitude, technology and engineering subscales according to grade levels as a result of their research with 3rd and 4th grade primary school students. However, in the same study, it was stated that there was no significant difference in science and mathematics subscales. Unlike our result, it is stated that there is an increase in STEM, engineering and technology attitudes as the grade level increases. Different samples may have been effective in the emergence of this difference. The generalisability of the results can be increased by repeating similar studies.

As a result of the analyses according to having a personal technological device, it was found that there was no significant difference only in the 21st century skills attitude subscale. In terms of maths attitude, science attitude, engineering attitude and STEM attitude, it was observed that students who had personal technological devices had significantly more positive attitudes. In their study comparing the STEM attitudes of private and public school students, Özyurt, Kayıran, and Başaran (2018) reached a conclusion in favour of private school students. They stated that private school students' access to STEM opportunities may be effective in this result. In our study, it is an expected result that the STEM attitudes of students who have personal technological devices are more positive.

Considering the duration of daily technological device use, it was found that the science attitudes of those who used less than 1 hour per day were significantly higher than those who used between 1-4 hours and 4-8 hours per day. It was observed that daily technological device use did not cause a significant difference in mathematics attitude, engineering attitude, 21st century skills attitude and STEM attitude.

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## CHAPTER 5

# THE ROLE AND IMPORTANCE OF PSYCHOLOGICAL COUNSELOR GUIDANCE TEACHERS IN THE EDUCATIONAL PROCESS

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SÜLEYMAN KARATAŞ<sup>2</sup>

### Abstract

This study aimed to determine the views of Psychological Counselor Guidance Teachers working in official primary and secondary education institutions affiliated with the Ministry of National Education regarding their involvement in the educational management processes. The study is a qualitative research, and interviews were conducted with participants using a semi-structured form. The research was conducted using a case study technique. The research conducted with Psychological Counselor Guidance Teachers working in different schools follows a pattern called holistic multiple case design. The participant group of the study consists of 8 Psychological Counselor Guidance Teachers who voluntarily participated and work in official schools affiliated with the Ministry of National Education in Kepez district of Antalya province.

A semi-structured interview form was used as the data collection tool, and participants' responses were recorded using a voice recorder device. The transcripts of the interviews were subjected to content analysis using computer software. The participants' views were categorized into draft themes under main themes and presented in the final form. These themes were presented in the form of tables in the findings section, supported by the participants' views to enhance the credibility of the research.

The main findings of the research reveal that the levels of participation and motivations of Psychological Counselor Guidance Teachers in educational management processes can vary, and in some cases, participation can be

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hindered, emphasizing the need for support and resources in this regard. Additionally, it is expressed that professional values are factors that influence the participation of Psychological Counselor Guidance Teachers in educational management processes.

**Keywords:** Psychological Counselor Guidance Teacher, Educational Administrator, School

## **INTRODUCTION**

This section includes the research problem, problem statement, sub-problems, objectives, significance, assumptions, limitations, and definitions.

### **Problem Statement**

The educational services carried out in schools should be considered as a whole. Factors such as students, teachers, parents, and the school's infrastructure are indispensable elements for a school to achieve success. Therefore, guidance services hold an important place in schools, and all stakeholders need to work together with a common understanding for success. In psychological counseling and guidance services, while the effectiveness of psychological counselors is highlighted, school administration, teachers, and parents also play a significant role and have responsibilities. In order for guidance services to be carried out professionally, it is important to have the understanding and collaboration of many individuals involved, such as psychological counselors who are closely related to the individual, administrators, teachers, and parents, as stated in the literature. This perspective emphasizes the importance of collaboration and participation for the success of services (Erkan, 2001; Kuzgun, 2009; Şahin, 2010). Research on the perception of guidance services in schools indicates significant perception differences among different stakeholders. Kepçeoglu (1984) determined significant perception differences among principals, specialists, and teachers in his study. Özdemir (1991) examined whether the expectations of students, teachers, psychological counselors, and administrators regarding guidance services differ according to their personal characteristics. According to the research results, it was found that younger administrators, compared to older ones, and administrators who participated in in-service training seminars, especially those related to guidance, had significantly higher expectations regarding psychological counseling and guidance services compared to those who did not participate (Tuzcuoğlu, 1995).

According to a research study conducted on expectations regarding guidance services provided in primary schools and their impact on students, it was found

that the individuals in the sample had high expectations from guidance services. Hamamcı (2004) revealed in a study on the professional issues of psychological counselors that school administrators and teachers lacked knowledge and understanding regarding psychological counseling and guidance services. Another study found that the personal and social adjustment of psychological counselors varied according to the professional issues experienced in the school environment (Ceyhan, 2000).

Determining the perceptions and expectations regarding school guidance services has an influential role in the success and effectiveness of these services. It is important to continue successful guidance services and correct any deficiencies or misconceptions. Therefore, it is necessary to determine the perceptions of school principals and class guidance teachers regarding the provided guidance services and psychological counselors. Identifying the thoughts and expectations of school administrators and class guidance teachers concerning educational, vocational, and personal-social guidance services is crucial. Evaluating the conducted guidance services by the primary responsible individuals will help achieve accurate results. These results will also facilitate offering recommendations regarding counseling services. Furthermore, it is observed that the studies in this field mainly focus on how psychological counselors and school guidance services are perceived. This research aims to contribute to the relevant literature by evaluating the conducted studies and emphasizing expectations and recommendations for such studies (Akar, 2017).

The management of educational processes is of critical importance in creating a successful learning environment in schools. The involvement of psychological counselor guidance teachers in educational management processes holds significant importance for the effective implementation of these processes. However, various problems and challenges may arise in this regard (Balcı, 2015).

Psychological counselor guidance teachers often engage in individual work with many students and provide counseling services. This situation limits their involvement in educational management processes. The lack of time management skills can make it difficult for psychological counselors to fulfill their other duties (Özdemir, 2016).

It is important for psychological counselor guidance teachers to communicate effectively with other stakeholders (school administration, teachers, parents). However, the inadequacy of communication channels or the lack of communication skills can hinder collaboration and information sharing. This, in turn, makes it challenging to effectively carry out educational management processes. Psychological counselor guidance teachers require sufficient resources and support to actively participate in educational management processes.

However, limited or inadequate resources can restrict the effectiveness of psychological counselors (Üstündağ, 2013).

### **Problem Statement**

What are the challenges experienced by psychological counselor guidance teachers in their involvement in educational management processes?

### **Sub-Problems**

1. How do the levels of participation and motivation of psychological counselor guidance teachers vary in educational management processes?
2. What are the inhibiting factors that affect the involvement of psychological counselor guidance teachers in educational management processes?
3. What are the support and resources required for psychological counselor guidance teachers to participate in educational management processes?
4. What are the professional values through which psychological counselor guidance teachers can participate in educational management processes?
5. What are the challenges faced by psychological counselor guidance teachers in their involvement in educational management processes, and what are the proposed solutions?

### **Research Aim**

The aim of this study is to determine the perspectives and challenges of psychological counselor guidance teachers regarding their involvement in educational management processes. By examining their levels of participation, motivation, inhibiting factors, required support and resources, professional values, challenges faced, and proposed solutions, the study aims to provide information in this field and offer recommendations to relevant stakeholders. Additionally, the study aims to promote the active involvement of psychological counselor guidance teachers in educational management processes, enhance collaboration in these processes, and establish a healthier communication and cooperation environment between school administration and teachers by developing strategies and policy suggestions. This research aims to contribute to the education system and professional development.

### **Significance of the Research**

The significance of this research on "Perspectives of Psychological Counselor Guidance Teachers on Their Involvement in Educational Management Processes" includes the following:

- Understanding the variations in the levels of participation and motivation of guidance teachers in educational management processes can help increase their active involvement in these processes by enhancing their motivation.
- Identifying inhibiting factors helps develop solutions to remove barriers that hinder the participation of guidance teachers in educational management, thus increasing their involvement and improving the effectiveness of educational management.
- Determining the necessary support and resources for the increased involvement of guidance teachers in educational management processes aids administrators and relevant stakeholders in developing policies and programs for guidance teachers. This enables guidance teachers to play a more effective role in educational management processes.
- Identifying the professional values through which psychological counselor guidance teachers can participate in educational management processes can guide individuals aspiring to pursue a career in this field, while also increasing their commitment and effectiveness.
- Identifying the challenges faced by guidance teachers in their involvement in educational management processes and proposing solutions provides guidance for educational institutions and administrators in planning preventive measures and improvements, leading to more efficient and effective educational management processes.

### **Assumptions**

During the research process, it is assumed that the researcher pays attention to the accuracy and reliability of the sources when conducting literature review. Additionally, it is assumed that the collected quantitative and qualitative data from the sources reflect realistic responses based on the sample and study group presented in the relevant sources.

### **Limitations**

The scope of this research includes indexed publications, scientific journal articles, and books as research sources. Additionally, the limitations of this study are as follows:

**Sampling limitation:** The sample used in the research may be limited to a specific region, school, or institution (Antalya Kepez District), which can restrict the generalizability of the results. For example, the focus may be solely on psychological counselor guidance teachers from a specific region or school.

**Participant limitation:** The number and characteristics of participants involved in the research may be limited. For instance, the study may only include psychological counselor guidance teachers within a specific age range or with specific experience. It is limited to 8 Psychological Counselors who were interviewed.

**Data collection method limitation:** The data collection method used in the research may have certain limitations. For example, data collected through tools such as surveys or interviews rely on participants' responses, and there may be limitations regarding the accuracy or impartiality of these responses. The data collection is limited to interviews and semi-structured interview forms.

**Time limitation:** The research may focus on a specific time period, which can affect the results and their generalizability over time. In an ever-changing educational environment, results may vary across different time periods. The data collection is limited to a 4-month time period.

**Researcher limitation:** The researcher's own biases, experience, or perspectives can influence the results. Therefore, the results may be limited to the researcher's subjective evaluations or interpretations.

## **Definitions**

Some terms used in this research are defined below:

**Psychological Counselor Guidance Teacher:** An educational personnel who provides guidance and counseling services in line with the general objectives of Turkish National Education. These services aim to support individuals in understanding themselves, evaluating educational and vocational opportunities, taking responsibility, and leading a healthy life in society (MEB, 2020).

**Educational Administrator:** A person responsible for establishing relationships with stakeholders both within and outside the school and carrying out administrative behaviors that meet their expectations. In addition to managerial duties, school administrators are primarily responsible for guidance and counseling services. They also coordinate all educational activities in the school (Yalçın, Yılmaz, & Karakaya, 2018).

**School:** An institution that plans, organizes, monitors, and evaluates students' educational processes. It also creates an environment that shapes students' lives. The primary purpose of a school is to contribute to students' development of their potential, increase their knowledge and skills, and promote healthy individual and social development (Yıldırım, 2019).

## **THEORETICAL FRAMEWORK AND RELATED RESEARCH**

### **Guidance Services**

The historical development of psychological counseling and guidance services in Turkey dates back to the mid-20th century. During this process, changes in the field of education in our country and increasing awareness of people's psychological needs led to the emergence of psychological counseling and guidance services. In the 1950s, the first steps were taken in the field of psychological counseling and guidance in Turkey. During that period, projects initiated by the Ministry of National Education aimed to establish guidance services in schools and provide support to enhance students' academic achievements. Additionally, some programs were implemented to support students' vocational guidance and career planning.

In the 1980s, the demand and need for psychological counseling and guidance services in Turkey further increased. With the opening of psychological counseling and guidance departments at universities, specialized personnel were trained. Through these departments, an academic pathway was provided for students who wanted to receive education in the field of psychological counseling and guidance. In Turkey, psychological counseling and guidance services became more widespread from the 1990s onwards. During this period, the opening of psychological counseling and guidance centers made counseling services more accessible. With the support of the Ministry of National Education, the number of guidance services in schools increased, and various programs were developed.

Yeşilyaprak (2007), the importance and necessity of guidance services are explained as follows: Primary education targets a wide range of students due to its compulsory nature. Therefore, guidance services provide the opportunity to reach more students.

The principles of guidance in primary education, as stated in Külahoğlu's (2004) study, are as follows. These principles are significant in supporting the child's healthy development and guiding them:

1. Each individual is unique and has different needs. Guidance services should take these different needs into account and provide personalized guidance.
2. Guidance should help students explore their potentials and guide them according to their abilities.
3. To support students' social and emotional development, guidance services should assist them in problem-solving, communication skills, and building effective relationships.

4. Guidance services should provide guidance to students in their career planning and provide them with information on career choices, educational opportunities, and the job market.
5. Guidance services should support students in being aware of health and safety issues and direct them to appropriate resources.

### **Guidance Program Implemented in Schools**

The guidance program implemented in schools is a framework aimed at supporting students' academic, career, personal, and social development. This program aims to provide guidance to students on life skills, career choices, social adaptation, emotional intelligence, and other related areas. The guidance program generally consists of various components, including individual counseling, group activities, classroom guidance sessions, and collaboration with families. Individual counseling involves one-on-one meetings between students and a guidance counselor to provide support on personal issues. Group activities, on the other hand, bring together students with similar concerns to enhance their interactions and work on common problems.

Classroom guidance sessions are student-focused activities conducted within the classroom environment. These sessions address topics such as building self-confidence, communication skills, and time management. Collaboration with families aims to involve parents in the implementation of the guidance program effectively. Involving families in the educational process provides additional support for students' development. The guidance program is shaped according to students' individual needs and the characteristics of the school. The success of the program relies on effective collaboration among guidance counselors, teachers, and administrators in the school, as well as the provision of diversified services tailored to students (Erkan, 2004).

It is recommended to provide structured group experiences in addition to guidance and psychological counseling activities targeting all students. In contrast to traditional methods, this model emphasizes a service-oriented approach and comprehensive assessment rather than administrative and bureaucratic tasks (Doğan, 2000).

### **Developmental Guidance**

This approach aims to support students' cognitive, emotional, social, and psychomotor development. Guidance services are designed according to students' individual needs and developmental stages. The goals of this approach include enhancing students' academic achievement, improving their social skills, and assisting them in exploring their own potential.

Developmental guidance programs are planned taking into account students' ages, developmental levels, and specific needs. These programs are implemented through individual sessions, group activities, educational interventions, and other methods. Guidance counselors help students recognize their strengths, establish career goals, and cope with personal issues.

### **Purpose of Psychological Counseling and Guidance Program**

The aim of the Psychological Counseling and Guidance Program is to support students' psychosocial, academic, and career development. These programs help students enhance their self-awareness, self-understanding, and establish healthy relationships. Additionally, they teach students emotional management skills, provide strategies for coping with stress, and develop problem-solving abilities. From an academic standpoint, these programs offer guidance in study skills, managing exam anxiety, and setting academic goals. In terms of career development, they provide students with information and counseling regarding career choices, universities, and the job market (Gençtürk, 2007).

### **Guidance Activities in the Psychological Counseling and Guidance Program (PCGP)**

The Comprehensive Psychological Counseling and Guidance Program (PCGP), which is based on the developmental approach, aims to reach all students in a systematic manner starting from the preschool level. One important component of this program is classroom guidance activities, which serve as key tools of the program. Classroom guidance activities play a significant role in achieving the goals of the PCGP and are a central intervention of the program.

Classroom guidance is one of the most important practices of developmental guidance and offers numerous benefits. Classroom guidance activities are designed to benefit multiple students at once. Through these activities, the general developmental needs of all students in the school can be addressed.

As indicated by Gysbers and Henderson (2006), with the implementation of the PCGP, school psychologists have started to play a more active role. Working in conjunction with the developmental guidance approach, psychologists actively engage in equipping students with various competencies. This shift has replaced the supportive and passive role of traditional guidance with a more proactive role.

The PCGP recognizes the importance of addressing the holistic development of students and actively involves psychologists in promoting their well-being and growth. Classroom guidance activities provide an opportunity for psychologists to interact with students, facilitate their personal and social development, enhance their coping skills, and foster a positive and supportive school environment. By



actively participating in the PCGP, psychologists contribute to the overall success and effectiveness of the guidance program in schools.

### **Relevant Studies**

The Psychological Counseling and Guidance Program is a program implemented in schools with the aim of supporting students' academic, personal, social, and career development. This program helps students develop coping skills, self-awareness, goal setting, and the ability to form healthy relationships. The Psychological Counseling and Guidance Program is generally conducted by the guidance unit or counseling service. The program aims to meet students' cognitive, emotional, and social needs, unleash their personal and academic potentials, enhance decision-making skills, and equip them with the necessary knowledge and skills for a healthy future.

The Psychological Counseling and Guidance Program has been the subject of several research studies. These studies aim to evaluate the effects of the program, understand different components of the program, and assess its overall effectiveness in promoting students' well-being and development.

In the study by Kalın (1999), the views of guidance teachers working in primary schools on "guidance in primary education" were examined. According to the results, in the early years of primary education, emphasis was placed on topics such as friendship, positive communication, and reading habits. In grades 4, 5, and 6, the focus shifted towards effective study habits, development of social skills, and addressing harmful habits. In the last two years of primary education, vocational guidance became more prominent.

In Güvenç's (2001) study, the challenges encountered in the implementation of guidance services were identified based on the views of class guidance teachers and psychological counselors (guidance teachers). The findings revealed that there was no significant difference in terms of gender and professional seniority among administrators, class guidance teachers, and guidance teachers. Furthermore, the opinions regarding the implementation of guidance services were examined in terms of the schools from which the participants graduated.

Nazlı's (2003) research demonstrated that teachers had a positive outlook on the comprehensive/developmental guidance model and that class guidance services generally achieved their goals. The study conducted by Rowley, Stroh, and Sink (2005) evaluated the content and material trends of comprehensive guidance programs in the United States. It revealed that programs focusing on problem-solving skills, self-control, anger management, empathy skills, career and vocational choices, study skills, and social skills were prevalent. Additionally, the Missouri Comprehensive Guidance and Counseling Program

was identified as the most widely used program, which aligned with the ASCA National Standards and the National Model.

## **METHOD**

In this section, the research model, study group, data collection tool, data collection process, and data analysis are discussed.

### **Research Model**

This study is a qualitative research conducted using a case study model. A case study is a qualitative research model used to deeply examine a specific phenomenon, event, group, or individual. In this model, researchers typically analyze the situation in detail by employing multiple data sources (interviews, observations, documents) and aim to develop an in-depth understanding.

A case study is used to understand, explain, or clarify a complex and unique situation. Researchers gain a broad perspective and seek to understand the unique characteristics, processes, and interactions by delving into the case in-depth.

Case studies generally exhibit the following characteristics: In-depth analysis: Researchers thoroughly analyze the examined case, aiding in the understanding of events, relationships, processes, and factors. Multiple data sources: Researchers gather information from various data sources, which can include interviews, observations, documents, among others. Multiple data sources enhance reliability and validity. Sampling selection: Case studies often employ purposeful sampling. Researchers select examples that best represent the case or are significant from critical perspectives. Significance of context: Case studies consider the examined case within a specific context. The context may encompass factors that influence the case and social, cultural, or historical elements. In-depth understanding: Case studies aim to develop an in-depth understanding of the examined case. This understanding focuses on comprehending the specific case rather than making generalizations (Yin, 2018). Since interviews were conducted with different Psychological Counseling and Guidance Teachers from different schools in the same district, the study follows a Holistic Multiple Case Design.

### **Study Group**

This research was conducted with 8 Psychological Counseling and Guidance (PCG) specialists working in public schools in the Kepez district. The study group consists of PCG specialists from different schools. These specialists work in different official schools in the Kepez district and have expertise in delivering guidance services.

The selection of PCG specialists in the study group was done randomly from among the professionals assigned as PCG specialists in official schools in the Kepez district. The research was conducted to understand the experiences and opinions of specialists in different schools, and to determine the effectiveness and needs of guidance services.

The study group comprises 8 PCG specialists working in official schools in the Kepez district. These specialists may have diverse experiences and perspectives due to their work in different schools. The research aims to gather and analyze the opinions of these specialists to gain a general understanding.

The study group is limited to the PCG specialists selected in line with the scope and objectives of the research. Since these specialists work in official schools in the Kepez district, the research results represent data specific to this region.

### **Data Collection Tools**

In this study, semi-structured interviews and observations were conducted with 8 PCG specialists working in different official schools in the Kepez district. During the data collection process, a predetermined interview form was used with the participants. Additionally, the observation method was employed to observe the implementation of guidance services and interactions of the participants.

The interview form begins with participant information, including their professional experiences, the schools they work in, and their areas of expertise. Then, questions related to the content of the guidance program were asked. Participants were asked to identify the objectives that should be included in the program and evaluate whether the program adequately achieves its intended outcomes. Furthermore, their opinions on the feasibility and adequacy level of the program's activities were obtained.

The participants' thoughts regarding the strengths of the program were also investigated. In this context, positive effects such as effective utilization of class hours, contribution to students' psychosocial development, and enhancement of the knowledge and experience of guidance teachers were identified. During the research process, the observation method, which is one of the data collection methods, was also utilized. By observing the participants' implementation processes and interactions in delivering guidance services, a more detailed understanding of the actual implementation of the program was sought.

In conclusion, this study focuses on semi-structured interviews and observation data obtained from 8 PCG specialists working in different official schools in the Kepez district. Through these data collection methods, the

participants' opinions on the content, outcomes, activities, and strengths of the guidance program, as well as the actual implementation process, are examined.

### **Data Collection**

In this study, interviews and observation data were collected from 8 PCG specialists working in different official schools in the Kepez district. The data collection process involved the use of a semi-structured form and observation methods. Prior to commencing data collection, ethical permissions were obtained to ensure the participants' consent. The participants were informed about the aims, procedures, and principles of confidentiality of the study, and written consent was obtained from them.

The interviews were conducted individually with each participant. The semi-structured interview form was prepared by the researcher and its content reflected the participants' thoughts and experiences regarding the guidance programs. The interview form included questions about the objectives, content, outcomes, activities, and strengths of the program. The interviews were conducted in a comfortable and open environment to allow the participants to express their opinions. The duration of the interviews was determined based on the participants' availability and preferences.

Furthermore, the observation method was used to observe the participants' implementation processes and interactions in delivering guidance services. The aim of the observation was to track the participants' daily work, interactions, and program implementations in their natural settings. Observation notes were carefully recorded by the researcher and supported by the generated data.

The data collection process was carried out with the participants' consent and active involvement of the researcher. The interview form and observation method served as effective tools for answering the research questions and understanding the participants' views and implementation processes of the guidance program. Thus, the interviews and observation data collected from 8 PCG specialists in different official schools in the Kepez district constituted the data collection phase of the study. These data will be analyzed in subsequent stages to answer the research questions and reach the study's conclusions.

### **Data Analysis**

The data analysis stage involves a thorough examination of the interviews and observation data collected from 8 PCG specialists in different official schools in the Kepez district to identify meaningful themes and perform data-driven coding. The data analysis process was conducted by the researcher and based on

qualitative data analysis methods. The audio recordings from the interviews and observation notes were transcribed and carefully reviewed.

During the analysis process, an initial familiarization with the data was established by reading and understanding the content. Attention was given to the participants' thoughts, experiences, and emphasized aspects of the guidance programs. Subsequently, coding was performed to identify specific themes. The coding process aimed to group and categorize the data in a meaningful way. The researcher generated data-driven codes by identifying recurring concepts, key phrases, similar thoughts, and significant points.

The codes may vary depending on the content of the data. For example, codes related to the objectives of the guidance program may differ from codes related to the program content. These codes aided in identifying themes and sub-themes during the data analysis. The analysis process continued with an in-depth examination of the data and the generation of codes. The researcher explored relationships and connections among the data, focusing on common patterns, consistencies, or differences. This allowed for meaningful interpretation of the data and the derivation of conclusions.

The analysis process was conducted in accordance with qualitative data analysis methods and facilitated the emergence of themes that addressed the research questions. The analysis findings contributed to shaping the study's findings and forming the conclusions.

## **FINDINGS**

In this section, the answers provided by the participants are presented as findings according to the corresponding sub-problems. When writing the findings, the answers given by the participants were considered and grouped under themes. Under each theme, the participants' opinions were stated, and their willingness to participate in the educational management process and the reasons behind it were attempted to be explained. In this way, each participant's opinions were presented accurately and comprehensibly.

For example, under the theme of interpersonal relationships, it was noted that participant 1 mentioned the positive effects of the educational management process on interpersonal relationships and its contribution to problem-solving. Similarly, under other themes, the participants' views on professional values, adherence to ethical principles, student-centeredness, authority, and task boundaries were explained. In this manner, the findings were presented in a clear and understandable manner by listing the participants' opinions under each theme.

## **Findings on the Level of Involvement and Motivation of Guidance Counselors in Educational Management Processes**

The responses of the interviewed guidance counselors regarding their perspective on school management and their level of involvement and motivation in the management processes are presented as themes:

The quotes from the participants in the table are as follows:

K1: "We need to maintain constant communication with school administration." K1: "Good intentions and respect are among our basic principles." K1: "School administration is important for the organization and harmony of the school." K1: "School administration should collaborate with the guidance service and exhibit a respectful approach." K2: "School administration supports us in our role as mediators." K2: "When we approach with good intentions, we can establish positive relationships." K2: "School administration plays a significant role in shaping the school culture." K2: "School administration approaches the guidance service with tolerance and collaboration." K3: "We have active communication with school administration, and they help us in problem-solving." K3: "We maintain positive relationships by acting with a sense of responsibility." K3: "School administration should balance the relationships among teachers, students, and parents." K3: "School administration values and collaborates with the guidance services." K4: "School administration facilitates communication and supports our role as mediators." K4: "Respectful and responsible behaviors are the key to positive relationships." K4: "School administration has an influence on shaping the cultural structure of the school." K4: "School administration approaches the guidance service with collaboration and respect." K5: "We need to have frequent communication with school administration, and they support our mediation role." K5: "We can establish positive relationships through goodwill, respect, and a sense of responsibility." K5: "School administration is one of the factors that determine the overall atmosphere of the school." K5: "School administration demonstrates a positive approach and collaboration with the guidance service." K6: "We have active communication with school administration, and they facilitate collaboration." K6: "Relationships based on goodwill and respect have a positive impact on the school environment." K6: "Okul yönetimi, rehberlik servisiyle yakın işbirliği içinde çalışmalıdır." K7: "Okul yönetimi, iletişim kanallarını açık tutarak arabuluculuk rolünü destekliyor." K7: "Saygı, güven ve sorumluluk temel değerlerimiz arasında yer alıyor." K7: "Okul yönetimi, pozitif bir okul kültürü oluşturmak için çaba gösteriyor." K7: "Okul yönetimi, rehberlik servisine gereken önemi vermelidir ve etkili iletişim kurmalıdır." K8: "Okul yönetimiyle sürekli iletişim halindeyiz ve sorunları çözmeye yardımcı oluyorlar." K8: "İyi

niyetli ve saygılı ilişkiler, olumlu bir okul atmosferi yaratmamıza yardımcı oluyor." K8: "Okul yönetimi, okulun vizyonunu ve misyonunu desteklemek için çalışıyor." K8: "Okul yönetimi, rehberlik servisine destek veriyor ve işbirliği içinde çalışıyor.",

### **Findings Regarding the Inhibiting Factors Affecting the Involvement of Psychological Counselor Guidance Teachers in Education Management Processes**

During the interviews conducted with Psychological Counselor Guidance Teachers, they were asked about their involvement in the Education Management Processes. The responses given by the participants were presented as themes.

K1: "We fulfill our role as mediators by maintaining strong communication with school management. We establish positive relationships based on goodwill, respect, and responsibility." K2: "The importance of school management is significant, and we contribute by actively participating in the process. We need to collaborate with the guidance counseling service." K3: "The behavior and reactions of school management can influence the school culture. There are some difficulties in adhering to regulations." K4: "We fulfill the role of a counselor by collaborating with school management." K5: "Through collaboration between administration and teachers, we can better respond to needs and problems." K6: "As a psychological counselor, we establish communication and connections with all parties in the school." K7: "We establish boundaries and fulfill our profession in accordance with professional ethics." K8: "There should be a psychological counselor in schools. The need should be recognized, and when the necessity of our profession is understood, participation in the process will occur naturally."

### **Findings Regarding the Support and Resources Required for the Involvement of Guidance Counselors in Educational Management Processes**

Psychological guidance counselors were asked about the variables that influence their involvement in educational management processes. The responses provided by the participants are presented as themes:

K1: Communication with School Administration Theme 1: Acting as a mediator School administration should involve school counselors in the process by recognizing their leadership skills and interpersonal relationships. K2: Goodwill, respect, responsibility K3: Importance of School Administration Theme 2: Being part of the team For guidance counselors to be involved in educational management processes, communication, sense of responsibility, and overcoming biases are crucial. K4: Collaboration with Guidance Services K5:

Impact of School Culture Theme 3: Collaboration and communication The perception and awareness of administrators towards the guidance services affect the process of involvement. Additionally, the interest and professional competence of the counselor are also important. K6: Non-compliance with regulations K6: School Administration and Psychological Counseling Theme 4: Role of the counselor School administration should pay attention to environmental factors, school culture, and regulations that make it difficult to involve counselors in the process. K8: Administration-Teacher Collaboration Theme 5: Administration-Teacher Collaboration Establishing collaboration and communication between school administration and teachers is important. K6: Bridge Role of the Psychological Counselor Theme 6: Bridge role I believe that psychological counselors play a mediator role in educational management processes. K7: Boundaries and Professional Ethics Theme 7: Boundaries and professional ethics It is important for psychological counselors to get involved in the process by considering the administration's biased approach, communication style, and expectations. K8 K12: Knowledge of the Administration about Psychological Counseling Theme 8: Level of knowledge of the administration The knowledge of school administration about psychological counseling affects the involvement of counselors in educational management processes.

### **Findings on Professional Values that Guidance Counselors can Contribute to Educational Management Processes**

During the interviews conducted with Guidance Counselors, they were asked the question, "What are the professional values that can be contributed to educational management processes?" The participants' responses were presented as themes:

K1-K2 Theme 1: Interpersonal Relationships Contributing to the educational management process through positive interpersonal relationships and assisting in the resolution of issues are their contributions. K3 Theme 2: Professional Values Professional values that Guidance Counselors can bring to educational management processes: empathy, competence, respect, value, and care. K4-K7 Theme 3: Adherence to Ethical Principles Values that a guidance counselor can bring to management processes: impartiality, different perspectives, objectivity, and empathy. K5 Theme 4: Student Focus Professional values that Guidance Counselors can bring to educational management processes: understanding, empathy, especially helping in charting a path by considering the student's life circumstances. K6 Theme 5: Contribution of Human and Ethical Values to School Culture Professional values that Guidance Counselors can bring to educational management processes: actively playing a role in making human and



ethical values part of the school culture. Empathy, unconditional acceptance, and respect. K8 Theme 6: Communication Skills Professional values that Guidance Counselors can bring to educational management processes: respect, empathy, tolerance, and active listening.

### **Findings on the Challenges Faced by Guidance Counselors in Participating in Educational Management Processes and Proposed Solutions**

During the interviews conducted with Guidance Counselors, they were asked the question, "Would you like to be involved in the educational management process? Why?" The participants' responses were presented as themes:

K1 Theme 1: Interpersonal Relationships Contribution to the educational management process through positive interpersonal relationships and assisting in the resolution of issues is valuable. K2 Educational management requires leadership, rule-setting, and implementation behaviors that are different from the skills of psychological counseling. I also believe that setting boundaries, discipline, and similar issues do not align with the ethical rules of psychological counselors. K3 Theme 2: Professional Values Professional values that Guidance Counselors can bring to educational management processes: empathy, competence, respect, value, and care. K4 I do not want to be involved in the process due to the working hours of educational administrators. K5 Theme 3: Adherence to Ethical Principles Values that a guidance counselor can bring to management processes: impartiality, different perspectives, objectivity, and empathy. K6 I do not want to be involved in the educational management process. I believe I am already part of the process. I prefer to be involved in the communication aspect and the practical aspects rather than as an administrator. K7 Theme 4: Student Focus Professional values that Guidance Counselors can bring to educational management processes: understanding, empathy, especially helping in charting a path by considering the student's life circumstances. K8 Theme 5: Authority and Role Boundaries No, I do not want to be involved in the management processes. Due to the long working hours prescribed by existing laws and regulations, I do not wish to participate. However, I will act in accordance with the relevant regulations.

## **RESULTS, DISCUSSION, AND RECOMMENDATIONS**

This section presents a discussion and conclusion by comparing the findings of the research to evaluate similarities and differences. Based on these results, recommendations are provided.

## **Conclusion and Discussion**

The majority of participants emphasized the importance of maintaining constant communication with school administration and highlighted how this communication supports the role of mediation. In addition to communication, goodwill, respect, and a sense of responsibility were identified as the foundation of positive relationships. Regarding school administration, participants highlighted the importance of school management for maintaining order and harmony in the school. Furthermore, they expressed that school administration plays a significant role in shaping the school culture and creating a conducive overall atmosphere. In relation to the guidance service, participants emphasized the need for school administration to collaborate with the counseling service and exhibit a respectful and positive approach. Participants also emphasized the importance of valuing guidance services and establishing effective communication.

In conclusion, the overall views of the participants emphasize their willingness to participate in the educational management process and highlight the fundamental principles within this process. Communication with school administration, the role of mediation, goodwill, respect, responsibility, school culture, and the guidance service were identified as important considerations by the participants. These findings indicate that these key elements should be taken into account for the success of the educational management process.

The study by Erden and Sağlam (2013) titled "Guidance Services in Primary Schools: A Case Analysis" emphasizes the importance of communication with school administration and states that goodwill, respect, and a sense of responsibility form the basis of positive relationships. The study by Şahin and Çiftçi (2014) titled "Content and Nature of Guidance Services in Primary Schools: Views of Guidance Teachers" highlights the significance of school administration for maintaining school order and harmony, as well as its role in shaping the school culture. Furthermore, the research conducted by Ayas and Akbaşlı (2017) titled "The Views of Secondary School Students on Guidance Services" emphasizes the importance of collaboration between the guidance service and school administration, as well as effective communication, and emphasizes the need to prioritize guidance services. These similar studies support the participants' views and emphasize the importance of communication, respect, responsibility, and collaboration in the educational management process.

The findings that emerged from the participants' views and themes indicate their focus on topics such as school administration, communication, the role of mediation, goodwill, respect, responsibility, school culture, guidance service, teacher-administration collaboration, the role of the counselor, boundaries, and

professional ethics. These findings highlight the need to consider these key elements in the educational management process and demonstrate that the participants are aware of these issues.

Güvenç's (2001) study, which examined the difficulties encountered in the implementation of guidance services based on the views of classroom guidance teachers and psychological counselors, the findings of this study align with those of the current study. According to the results, no significant differences were found among administrators, classroom guidance teachers, and guidance teachers based on gender and professional seniority variables. Furthermore, opinions regarding the implementation of guidance services were examined in relation to the participants' graduated schools. It was emphasized that continuous communication with school administration is important in fulfilling the mediator role and solving problems. Good intentions, respect, and responsibility were highlighted as fundamental principles and were stated to be effective in establishing positive relationships. The participants emphasized the significant role of school administration in maintaining order, harmony, cultural structure, and values of the school. Additionally, the importance of collaboration with the guidance service and the necessity of displaying a positive attitude were emphasized. It is crucial for psychological counselors to collaborate with school administration in order to effectively provide guidance services.

According to a study conducted by Şahin (2002), it was found that administrators have high expectations from psychological counselors. However, it is understood that in recent times, pre-service and in-service trainings have increased to better prepare school psychologists for their profession, and they are fulfilling their duties in a better and more effective manner. Similar results were also found in the current study. Under the theme of administration-teacher collaboration, it was emphasized that collaboration and communication between school administration and teachers are important. This collaboration is necessary to achieve better results in the educational management process. Under the theme of the bridge role of the psychological counselor, participants expressed their belief that psychological counselors play a mediator role in the educational management process. It was emphasized that psychological counselors have the task of facilitating communication and connection among all parties in the school. Under the theme of boundaries and professional ethics, it was stated that it is important for psychological counselors to be involved in the process by considering the administration's biased approach, communication style, and expectations. Under the theme of the level of knowledge of the administration, it was expressed that the administration's knowledge about psychological counseling affects their involvement in the process. It was emphasized that the

school administration should increase their knowledge level on the subject in order to actively involve psychological counselors in the educational management process.

### **Recommendations**

The following recommendations are provided based on the perspectives of Psychological Counselor Guidance Teachers on their involvement in the educational management processes:

1. **Communication and collaboration:** Regular communication channels should be established between educational administrators and psychological counselors, and collaboration should be fostered. This will enable a clearer understanding of the expectations, boundaries, and contributions of both parties.
2. **Education and awareness:** Education and awareness campaigns should be conducted between school administration and psychological counselors. Educational administrators should better understand the skills and contributions of psychological counselors, and likewise, psychological counselors should have a better grasp of educational management processes.
3. **Compliance with ethical standards:** Psychological counselors should fully comply with ethical standards when participating in educational management processes. This ensures that ethical values such as impartiality, empathy, validity, and different perspectives are considered during their involvement.
4. **Flexibility and adaptability:** Psychological counselors considering participation in educational management processes should demonstrate the flexibility required by the process and be adaptable. By paying attention to factors such as working hours and regulations, their participation in the process can be more productive.
5. **Process evaluation:** Process evaluation should be conducted to assess the impact of psychological counselors' involvement in educational management processes. This evaluation will help identify the positive aspects, challenges, and areas for improvement in their participation.

These recommendations can be used to optimize the involvement of psychological counselors in educational management processes and enhance collaboration and understanding between both parties. It is important to focus on communication, education, ethics, and process evaluation, particularly.

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Yayın



## CHAPTER 6

# NATURE AS A DIDACTIC AND SOOTHING FORCE IN “I WANDERED LONELY AS A CLOUD” AND “TABLES TURNED” BY WILLIAM WORDSWORTH

SONER KAYA <sup>1</sup>

### <sup>1</sup>Abstract-

This research examines the thematic importance of nature in William Wordsworth's poetry, specifically highlighting the instructive and soothing aspects present in two of his noteworthy works, "I wandered Lonely as a Cloud" and "Tables Turned." The study highlights Wordsworth's prioritization on individual spirit, emotions, and imagination over reason and intellect, as it examines the transition from the Augustan age to the Romantic period. The concept of nature takes on a prominent role, acting as a source for happiness and a healing influence for people dealing with the difficulties brought about by urbanization and industrialization.

Wordsworth vividly depicts the influence of nature on the human spirit in his poem "I wandered Lonely as a Cloud," specifically through the use of imagery portraying golden daffodils. The poem expresses the poet's deep affinity with nature, depicting it as a source of healing and knowledge. The poet derives consolation and joy from the remembrance of daffodils during periods of solitude, showcasing the clear therapeutic impact of nature. Wordsworth juxtaposes the mundane character of literature with the enlightening knowledge derived from nature in his poem "Tables Turned." The poem emphasizes the educational function of nature, conveying spontaneous wisdom and truth through its beauty and serenity. Wordsworth promotes the direct experience of nature, highlighting its unmatched capacity to educate and restore the human spirit. The research emphasizes Wordsworth's distinctive viewpoint on nature, depicting it as both a mentor and educator. The poet's work demonstrates a profound conviction in the ability of nature to cure psychological anguish, bring happiness, and impart significant wisdom that surpasses that of books and traditional education.

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Ultimately, Wordsworth portrays nature as a fundamental and transformational factor in human existence during the Romantic period.

**Key words:** Romantic period, William Wordsworth, Nature, Poetry, Individual spirit

### **Introduction**

Nature has consistently been a prominent theme in several literary periods, with its inherent depth and significance. Nevertheless, the perspective on the concept of nature has varied over time. Nature has consistently been a central subject and a major source of inspiration for literary works throughout history. Therefore, nature has consistently been present in various works of art, both overtly and subtly, and has significantly influenced their creation. At times, it has served as both a cause of sadness and a cause of happiness for those who read, write, or compose poetry. For instance, nature served as a catalyst for sad poetry throughout the old English period, while in the Romantic Period it functioned as a tool for evoking emotions in numerous literary works.

The Romantic period spanned around four decades, commencing in the late 18th century and concluding in the early 19th century. Considering the themes and approaches of this period, it is evident that the Romantic era differed from the preceding Augustan era. As Ronald Carter and John McRae assert, in contrast to the Augustan age, in Romantic age “the individual spirit rather than an ordered society became important” (103). The poetry was mostly based on the individual spirit, therefore emotions, feelings and imagination gained importance in the Romantic age, which were not paid attention to in Augustan age. In other words, “for Augustans, feelings and imagination were dangerous; for Romantics, reason and the intellect were dangerous” (Carter and McRae 103). Given that the works of the Romantic period prioritize sentiments, emotions, and imagination over intellect, it is evident that nature, which played a vital role throughout this era, was essential for the individual's spirit and emotions. Thus, nature, as previously stated, is connected to the personal emotions and imagination in Romantic literature, particularly in poetry.

William Wordsworth, often referred to as the poet of nature, is reminded of the term "nature" and its significance in Romantic poetry. Wordsworth “sermonizes about the importance of the nature” (Fulford 260), and he is known for his numerous works centred on nature, ascribes various functions to nature, including that of an educator and healer, in addition to its ability to evoke strong emotions in individuals. Wordsworth's poetry incorporates his profound spiritual rapture, primarily centred around nature, offering a poetic form that captures its profound impact on the human soul. Vision and memory are crucial elements in

Wordsworth's poetry, since nature is both a didactic and soothing force, evoking intense joy through its vivid imagery and providing solace when individuals are in psychological distress. Hence, the perception and remembrance of the natural world profoundly impact individuals, including poets. Therefore, drawing inspiration from nature, he perceives nature as a fundamental component of human existence. From this analysis, it can be inferred that Wordsworth perceives nature as didactic and as a means of seeking respite from the sufferings and challenges of daily life. Consequently, he advocates for individuals to shift their attention and direct it towards nature in order to acquire knowledge and experience profound happiness. During the Romantic period, the prevalence of urbanization and industrialization led to a significant migration of people from rural areas to urban centers. Consequently, individuals faced significant difficulties, prompting Wordsworth to view nature as a source of rejuvenation for the human spirit, essentially functioning as a therapist to alleviate the pressures of daily life and other challenges. Instead of employing an academic discourse, he utilizes everyday vernacular that is comprehensible to the general populace. All in all, Wordsworth, specifically, with his works "I wandered lonely as a cloud", "Tintern Abbey", "Tables Turned", and The Prelude, reveals how the nature enters the mysterious regions of human heart and helps them both learn and ease their gloominess.

## **LITERATURE**

### **Nature as a Didactic and Soothing Force**

Living in the Lake District, he strolls and composes his poem "I wandered lonely as a cloud," also referred to as "Daffodils," inspired by the profound emotions evoked by the natural scenery. The poem serves as a tribute to the beauty of nature and a reflection of its profound impact on the human spirit. The author establishes a comparison between himself and a cloud in the poem, expressing his overwhelming emotions upon being captivated by specific natural scenes. In fact, he conveys the significance of nature in human existence through his verses. The emotions are instinctive as his heart is brimming with delight upon witnessing flawless unity in the natural world. In the first stanza he starts by setting aforementioned analogy between him and the cloud saying:

I wandered lonely as a cloud

That floats on high o'er vales and hills, When all at once I saw a crowd, A host, of golden daffodils; Beside the lake, beneath the trees, Fluttering and dancing in the breeze

(I wandered Lonely as a Cloud 1-6)

The poet draws a parallel between himself and a cloud, since he perceives every aspect of nature from a vantage point in the sky. He describes himself as floating over the hills and valleys. When he begins to depict the natural wonders, he employs the term "crowd," which may initially seem peculiar since it typically connotes congestion and noise, both of which are mentally draining concepts for humans. Nevertheless, when applied to the multitude of daffodils, the term "crowd" does not connote negativity, but rather signifies the copiousness of the exquisite daffodils in their natural environment. In this poem, the poet emphasizes that everything in nature is invigorating and joyful. Upon observing the daffodils, the poet alludes to the impeccable concordance among the lake, trees, and the daffodils. He suggests that natural beauties coexist harmoniously in nature, resulting in a captivating image that soothes the human mind and leaves a lasting impression on their memory. The author emphasizes the captivating impact of the daffodils on his mental state by describing them as dancing. Here, he demonstrates the exquisite beauty of daffodils in their natural environment. Indeed, there is a profound essence in this verse, as it entails the act of observing nature akin to a cloud. The poet endeavours to demonstrate that individuals experiencing loneliness can seek solace in the embrace of nature. The poet keeps his praise of the nature saying:

The waves beside them danced; but they  
Out-did the sparkling waves in glee:  
A poet could not but be gay,  
In such a jocund company:  
I gazed--and gazed--but little thought  
What wealth the show to me had brought  
(13-18)

He consistently depicts the natural surroundings, emphasizing the graceful movements of the lake's waves and their significant role in enhancing the overall beauty of the scenery. He references the impact of its effect and asserts that it is impossible for a poet to not feel delight when witnessing such a sight. Consequently, he persists in observing the vision and expresses how nature is a valuable asset for humanity, enriching human existence with its abundance. In the final stanza, he emphasizes the way in which this picture provides him with psychological support at times of need. He says:

For oft, when on my couch I lie  
In vacant or in pensive mood,  
They flash upon that inward eye  
Which is the bliss of solitude;  
And then my heart with pleasure fills,

And dances with the daffodils.

(18-24).

These lines also demonstrate the therapist-like quality of nature in human life, since the poet emphasizes the therapeutic influence of nature when he is feeling pensive or sad. When he reclines on his couch with feelings of sadness and desperation, it is the inherent essence of nature that provides him solace. The author discusses the experience of recalling the daffodils and their harmonious relationship with other natural elements, which can bring great joy to the human soul when necessary. It is crucial to emphasize the message that Wordsworth is attempting to convey. He emphasizes that even contemplating the outdoors has a therapeutic effect on humans. His heart is filled with excitement and begins to dance metaphorically, inspired by his imagination and the beauty of nature. For this imagination of the natural objects, Eric Gidal says, "Wordsworth's configuration of his recollective mind as a wanderer...echoes a long tradition of the representation and enactment of memory as a physical repository of objects and images" (457). According to the quote, his memory of the natural world helps him restore his mood when he is feeling down.

In the aforementioned poem, Wordsworth aimed to portray not only the therapeutic aspect, but also the pedagogical aspect of nature. By providing a pleasant visual experience, it enhances the well-being of individuals, which is essential for a joyful existence. In this sense, Nicky Huys asserts, Wordsworth's recollection of daffodils in "I Wandered Lonely as a Cloud," for instance, becomes a meditation on the healing power of nature on the human spirit" (13). As Huys suggests, the nature alleviates the melancholy caused by the daily pressures of life, urbanization, and industrialization. Thus, nature suggests that maintaining harmony within it is essential for maintaining order, and it also suggests that individuals might discover happiness within nature. Hence, it is evident that nature provides an abundance of resources and opportunities for mankind. Overall, the author portrays the therapeutic and educational aspects of human nature in this poem. F

In his poem "Tables Turned," Wordsworth also explores the significance of nature in human life by referencing specific aspects of the natural world. He compares and contrasts nature with books and other objects from which we get knowledge. He starts his lines by saying:

Up! up! my Friend, and quit your books;  
Or surely you'll grow double:  
Up! up! my Friend, and clear your looks;  
Why all this toil and trouble?

(Tables Turned 1-4)

In Wordsworth's poem, the speaker asserts that books are not the ultimate source of enlightenment and encourages his friend to abandon them. He asserts that there exists a superior method outside books for enhancing one's abilities. He perceives books as tedious and believes that they are a time-consuming activity. Wordsworth, through the speaker, begins to allude to the educational aspect of nature by contrasting it with literature, which he perceives as a futile use of time. He continues his idea in following lines saying:

The sun above the mountain's head,  
A freshening lustre mellow  
Through all the long green fields has spread,  
His first sweet evening yellow.

(5-8)

Contemplating the insignificance of books in the pursuit of education, the speaker proceeds to articulate a vivid depiction of an idealized connection with nature. He describes the splendor of the sun as it rises above the mountains and its ability to rejuvenate the human psyche. Furthermore, he references the verdant aspect of the natural world, which he believes brings immense joy to the human spirit. Wordsworth explores the mundane aspects of books after experiencing the extraordinary visions of nature writing:

Books! 'tis a dull and endless strife:  
Come, hear the woodland linnet,  
How sweet his music! on my life,  
There's more of wisdom in it

(9-12)

The poet further employs juxtaposition by asserting that books are dull and devoid of any enriching content when compared to the profound wisdom inherent in nature. Furthermore, he asserts that the natural noises resemble music and have a beneficial impact on the human psyche. Here, he emphasizes his dual role as both a therapist and teacher by conveying both the insight and knowledge of nature. He always asserts that books are incomparable to nature in their ability to educate and provide therapeutic benefits to the human soul. He is making a distinct allusion to nature's role as an educator, as he states "let nature be your teacher" (16). The poet elaborates on the educative function of the natural world as a teacher and writes:

She has a world of ready wealth,  
Our minds and hearts to bless—  
Spontaneous wisdom breathed by health,  
Truth breathed by cheerfulness.  
One impulse from a vernal wood

May teach you more of man,  
(16-22)

In the preceding lines, the poet provides additional information regarding the characteristics of nature and its instructive aspect, so demonstrating nature's efficacy as an educator. He emphasizes the fact that nature possesses an abundance of resources that can be considered as wealth. Nature captivates not just the intellect but also the emotions. According to the poet, by regulating the heart, it brings happiness and relieves the human from melancholic states. Similarly, by regulating the mind, it enlightens the human as an exemplary instructor. The poet also highlights the notion that the sentiment towards the sight of the spring can impart more knowledge than any individual. He highlighted that via firsthand experience of nature, a person might acquire knowledge that is unattainable from any other individual or written source. Thus, he demonstrated how nature serves as an impeccable instructor in the realm of human existence.

Overall, in his poem "Tables Turned," Wordsworth utilizes a comparison between books, individuals, and nature in relation to their instructional value for humanity. Wordsworth's contrast demonstrates that nature serves as an exemplary instructor for individuals, and engaging with nature can yield significant advantages. In this sense, Patra and Prasad assert:

*The poet believes that by submitting ourselves to Nature in the right frame of mind, we shall gain more moral energy and spiritual insight than we can ever get from all the philosophies, or all the teachings of the saints and the sages, and that through such energy and insight it is possible to obtain a clearer vision of the good the evil, the moral and the immoral (66).*

Therefore, as the quotation elucidates, in the aforementioned poem, Wordsworth highlights the significance of nature as an instructive and healing force, emphasizing that we can acquire greater knowledge from literature than from other sources.

## **CONCLUSION**

Wordsworth's approach to nature in his poems differs significantly from that of his contemporaries, both in terms of style and concepts. His poetry revolves around nature, and he is often referred to as "the poet of nature" and "the priest of nature." By establishing nature as the foundation of his poetry, he assigns two significant responsibilities to it. These are the functions of nature as an instructor or as a counsellor. Wordsworth suggests that nature possesses a mystical ability to calm and restore the human spirit. It inspires individuals to embrace happiness and confront the challenges of life, as well as overcome feelings of isolation, sadness, and sorrow. He emphasizes that nature encompasses all the necessary

elements for people's training. Specifically, he alludes to the influence of nature as an instructor in individuals' lives. According to his expressed viewpoint, as shown in his poems, nature imparts knowledge to individuals more effectively than any other written work or person. In essence, nature serves as an ideal healer for the human spirit and an exceptional instructor for human existence.



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## CHAPTER 7

# ARCS MOTIVATION THEORY AND RATIO-PROPORTION: MATHEMATICS TEACHERS' STRATEGIES

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HASAN ÜNAL<sup>2</sup>

### <sup>1</sup>INTRODUCTION

Motivation can be defined in many ways, such as what we want to do and what we choose to do (White, 1959), the energy that drives us to do what we desire (Daugherty, 2019), the desire or drive to achieve (Mohamad, Salleh, & Slaah, 2015), and the concept that explains deep concerns about why we do what we do (Keller, 2010). Students' motivation in the classroom is always critical for course developers and instructors (Chang, Chang, & Shih, 2016). Because motivation is an important pre-requisite of learning and performances (Lin et al., 2021). Learning motivation, an intrinsic force that mobilises and sustains students' enthusiasm for learning, plays a key role in facilitating the learning process and improving students' learning performance (Deci and Ryan, 1985; Paas, Tuovinen, Merriënboer, van, & Darabi, 2005; Laurens Arredondo & Valdés Riquelme, 2022). Motivated students are expected to achieve high levels of learning performance and achievement, while students with low motivation tend to be closely linked to failure and lack of achievement (Keller, 2010). Increasing students' motivation to learn is related to both their academic and professional lives, so it can be said that it is an important point to be emphasised. Learning motivation is acquired through classroom experiences such as direct instruction, modelling and interaction with the instructor, as well as general experience (Cheng & Dörrnyei, 2007). Under unfavourable learning conditions, students not only have relatively low learning effectiveness, but also have difficulty in applying their knowledge to real-life problems (Tsai et al., 2022).

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Mathematics is one of the courses in which students are intertwined with real life problems. The demands on students' skills in mathematics require not only counting skills but also logical and critical reasoning skills in problem solving. They are expected to solve real-world problems, not just theoretical applications in the classroom (NCTM, 2000; Arıkan and Ünal, 2015; Sguarti, 2022). One of the factors affecting students' low mathematical critical thinking skills is motivation to learn (Suherman et al., 2021). For students to have classroom experiences in mathematics and to increase their motivation to learn, mathematics teachers' motivation to teach is also important. Teachers' skills are a very important basis for the inclusion of motivational strategies in the curriculum and for teaching how to create motivating learning environments (Dörnyei, 2001). It is desirable for teachers to utilise different teaching strategies by creating an effective classroom environment, to increase their own motivation and thus increase the motivation of students. In this context, motivational issues should be considered in the development of tools, instruments and digital content used for learning (Cardenas-Sainz et al., 2023). A widely used motivation theory is attention, relevance, confidence, and satisfaction (ARCS) (Li and Keller, 2018). The aim of ARCS theory is to apply motivational strategies manipulated by instructors to increase the motivational appeal of instruction (Chang et al., 2016). Unlike many other motivational models or theories, this theory provides a comprehensive picture of motivation for both teachers and students, including theory, practice, broad components, detailed motivational structures, and ARCS theory can be easily adapted into tools for instructional design, classroom guidance, and teacher evaluation or teacher training on motivational strategies (Maeng & Lee, 2015). From these perspectives, we can say that Keller's (2010) ARCS model can be effectively used to improve the motivation of mathematics teachers and mathematics students.

### ***ARCS Motivation Theory***

Motivational strategies are crucial for educators to increase students' engagement in learning activities and help them achieve their learning goals (Cai et al., 2022). Although motivational design is a separate process, it is used in conjunction with the systematic approach to instructional design and adds another dimension to it (Keller 1984; Keller 1987; Keller, 2010).

There are many theories and concepts that attempt to explain the dynamics and qualities of motivation (Keller, 2010). Two types of motivation concepts familiar to all educators (Keller, 2010) can be mentioned: Intrinsic and extrinsic motivation. Intrinsic motivation assumes that instruction that better supports

learners' intrinsic needs and goals will result in more learning (Means, Jonassen and Dwyer, 1997). Intrinsic motivation is present when learners actively seek and engage in activities without having to be rewarded with materials or activities outside the learning task (Deci and Ryan, 1985; Mohamad et al., 2015). Extrinsic motivation refers to motivation that comes from outside the individual, such as motivating factors, external or external rewards such as money or grades (Mohamad et al., 2015). Research has shown that intrinsic motivation promotes deep learning (Jacobson & Xu, 2004). Furthermore, Feng and Tuan (2005) pointed out that the ARCS model can effectively increase learners' intrinsic motivation, make them realise that they can learn and can self-determine.

ARCS motivation theory is based on Keller (1984). Keller (2010) explained four categories of motivation. These categories help you understand the main components of motivation to learn and provide guidance for creating strategies to be used for each category. Table 1 shows the ARCS categories, definitions, and process questions.

**Table 1: ARCS Categories, Definitions and Process Questions**

Major Categories and Definitions		Process Questions
<b>Attention</b>	Capturing the interest of learners; stimulating the curiosity to learn	How can I make this learning experience stimulating and interesting?
<b>Relevance</b>	Meeting the personal needs/goals of the learner to effects a positive attitude	In what ways will this learning experience be valuable for my students?
<b>Confidence</b>	Helping the learners believe/feel that they will succeed and control their success	How can I via instruction help the students succeed and allow them to control their success?
<b>Satisfaction</b>	Reinforcing accomplishment with rewards (internal and external)	What can I do to help the students feel good about their experience and desire to continue learning?

Reference: (Keller, 2010).

Attention includes motivational variables related to stimulating and sustaining students' curiosity and interest. Attention in a motivational context means something different than in a learning context. In the learning context, concern is about how to manage and direct the learner's attention. In the motivational context, attention is for attracting and sustaining. Attention category includes human characteristics such as curiosity and questioning (Keller 1987; Keller, 2010). The questions "What can I do to attract their

attention?", "How can I encourage an attitude of enquiry?", "How can I use various tactics to maintain their attention?" are used in the attention step. Relevance refers to students' perceptions that their instructional needs are consistent with their goals, compatible with their learning styles, and connected to their past experiences (Keller, 2016). "How can I best meet my student's needs?", "How and when can I provide my students with appropriate choices, responsibilities, and influences?", "How can I connect instruction to students' experiences?". Confidence refers to the effects of positive expectations for success and attributing success experiences to one's own abilities and efforts (Keller, 2010). "How can I help create a positive expectation for success?", "How will the learning experience support or enhance learners' beliefs in their competence?", "How will learners know clearly that their success is based on their efforts and abilities?" are questions to be asked in this step. If you are successful in achieving these first three motivational goals (attention, relevance, and confidence), students will be motivated to learn. Then, to have a sustained desire to learn, they need to have feelings of satisfaction with the process or outcomes of the learning experience (Keller 1987; Keller, 2010). The questions "How can I provide meaningful opportunities for learners to use their newly acquired knowledge/skills?", "What will reinforce learners' achievements?", "How can I help learners to have a positive feeling about their achievements?" are used in this step.

### ***Literature Review***

ARCS motivational theory provides blueprints for integrating motivational and instructional strategies into the classroom to train teachers on how to develop effective lesson plans (Maeng & Lee, 2015). Keller (2010) argued that motivational design should occur together with instructional design. That is, this theory is applicable to instructor behaviour, instructional materials, and course design (Keller, 2010). When appropriately designed and implemented by teachers in the classroom environment, the four categories of ARCS theory maintain students' sustained interest and motivation to learn (Keller 1987; Keller, 2010).

In the literature, we see that ARCS theory is used in many different fields. Nursing (Kim and Hyong, 2014; Cai, et al., 2022; Hsu et al., 2023; Zhang et al, 2023), pharmacy (Pittenger and Doering, 2010; Daugherty, 2019), engineering (Shellnur, Savage and Knowlton, 1998; Zhang, 2017; Kishore, 2018), language teaching (Chang and Lehman, 2002; Molae and Dortaj, 2014; Maeng and Lee, 2015; Chang, Song and Fang, 2018), science education (Feng and Tuan, 2005; Cengiz, 2009; Cengiz and Aslan, 2012; Kim and Lee, 2015; Soykan, 2018),

technology use and motivation (Chang, Chang and Shih, 2016; Li and Moore, 2018; Turel and Sanal, 2018), mathematics education (Gökcül, 2007; Filiz and Gür, 2021; Suherman, Zaman and Farida, 2021; Lutviano, Kartono and Isnarto, 2022). It stands out that these studies were generally conducted with middle school, high school, and university students. For example, Cai et al. (2022) suggested the use of motivational teaching strategies based on the ARCS model in the nursing curriculum to increase and maintain students' motivation to learn and aimed to evaluate the learning motivation of nursing students. Feng and Tuan (2005) used the ARCS model to teach acids and bases unit to 11th grade students and the results showed that it can increase the motivation and achievement levels of low motivated students. Chang et al. (2016) used mobile instructional designs to encourage students' active learning and motivation; similarly, Li and Moore (2018) designed course materials on Massive Open Online Courses (MOOCs) and measured students' perceptions of the course. When analysing the literature, it becomes clear that ARCS theory aims to provide a bridge between theory and practice (Maeng and Lee, 2015), beyond simply providing a framework and elaborating the concept of motivation. Apart from these purposes, the ARCS motivation model has the potential to serve as a pedagogical framework for providing satisfying learning experiences (Lin et al., 2021). The small number of studies in mathematics education indicates the need for applications in this field. In addition, most of the studies in this field include studies conducted with secondary school students (Gökcül, 2007; Özer, 2015; Balantekin & Bilgin, 2017; Filiz & Gür, 2021; Suherman, Zaman, & Farida, 2021; Lutviano, Kartono, & Isnarto, 2022). Studies examining students' motivation for mathematics lessons are valuable, but no study with mathematics teachers, who are one of the factors that help students achieve this motivation, was found as far as the researcher could access. In this study, examining the strategies of mathematics teachers using ARCS theory reveals the originality of the study.

It is not so easy to understand what motivates teachers, and in the specific case of this study mathematics teachers, to use online teaching and learning tools in the classroom, every teacher needs to have a high motivation to change the way of teaching and learning in the classroom so that the activity in the classroom is more interesting and so that students become active to compete with each other (Modamad, Salleh, & Salam, 2015). The intensive curriculum in the mathematics course may cause teachers to have low levels of motivation. Keller (2016) also stated that the teaching job includes many obstacles to building and maintaining personal motivation, such as the requirement to be a high-performing student. However, ARCS theory has been validated in previous

studies as an effective strategy to improve learning motivation and behaviour (Li & Keller, 2018) and focuses on the design of instructional strategies to improve students' motivation to learn (Tsai et al., 2022). If teachers' instructional design can promote and sustain learners' motivation and expectations, learners' degree of effort can increase (Keller, 1983). These explanations suggest that teachers should receive active training in motivational strategies (Maeng & Lee, 2015). More specifically, it raises the question of how learning processes that increase students' motivation can be designed based on ARCS motivation theory. This can be achieved by teachers designing lesson plans and activities using a valid motivation theory such as ARCS theory.

In this study, we worked with mathematics teachers who were motivated to specialise on their field. These teachers are studying to get their master's degree on mathematics education field. The teachers aimed to create effective lesson plans with ARCS strategies for the subject of ratio and proportion in the mathematics course.

## **METHOD**

This study was conducted with 29 mathematics teachers who were continuing their graduate studies. The Instructional Materials Motivation Survey (IMMS) (Keller, 1987; Keller, 2010) was used to formulate strategies for teachers to teach ratio and proportion. Keller (1987) designed this scale to evaluate the motivational properties of instructional materials. This questionnaire measures the four motivational categories of ARCS. Keller (2010) stated that each of the four sub-surveys containing IMMS items can be used and scored independently. Furthermore, the format of the questionnaire can be modified to use Likert-type scales and electronic scoring methods (Keller, 2010). In this study, mathematics teachers prepared examples of effective lesson plans for the topic of ratio and proportion by creating strategies for each of the items including the four subcategories of the ARCS to create a lesson plan for the topic of ratio and proportion. Strategies obtained from 29 teachers were analysed. In the Results section, examples of these studies will be presented.

## **RESULTS**

In this section, examples of strategies created by teachers for IMMS items will be given. However, not all the teachers participating in the study may have created strategies for all items on the survey. In this context, although strategies are not formed for every item in the survey, strategies formed for some items will be shared.

### *1. Strategy Examples for IMMS Attention Category Items*

Teachers mentioned strategies to attract students' attention while introducing the topic of ratio and proportion. The items in the Attention category for which mathematics teachers created strategies and examples of strategies are given below.

**"The material/lesson tool used in this lesson was remarkable."** In this item, teachers emphasised the importance of using technological tools. For example, one teacher suggested using websites such as Purplemath, Mathway, MathIsFun. These interactive websites provide explanations, examples, and exercises about the topic of ratios. They provided examples that can be utilised in activity preparations. Another teacher planned to draw the symbol of the Turkish lira on a hard cardboard, cut it out and bring it to the classroom, thinking that students could relate it to their own lives.

**"Lectures were enjoyable with this material/lesson tool."** For the item, a few teachers thought of planning a field trip to the school if there is an amusement park and Ferris wheel in the city where the school is located after the subject of ratio and proportion was explained. They stated that with the opportunity to observe situations such as the height of the Ferris wheel, its radius, and the time it takes to complete a round, students could be given the opportunity to carry out ratio building activities. In this regard, they said, "We would make learning enjoyable by providing students with learning by doing and experiencing". Another teacher suggested the strategy of coming to the classroom with a matryoshka doll material to attract and motivate students' attention in the introduction part. Another group of teachers stated that students' interests should be considered. For example, they suggested encouraging them to make predictions by examining real data tables or line graphs from real life, such as football or Minecraft game. They suggested a strategy such as "For football, by looking at the data, it can be predicted how the score will be in the next match, for example, if Galatasaray gets 3 more wins, it can get 9 more points".

For the item **"I learnt some surprising and useful information in this lesson that I did not expect"**, teachers aimed to attract attention by giving examples of information used in different professional groups. For example, the anaesthesiologist, who adjusts the amount of fluid given to the patient during the operation, calculates the amount of these fluids according to the patient's weight, preoperative fasting time, and the size of the operation. Another teacher, similarly, found it important to share with the students' posters showing where the ratio is in architecture, art, nature, and the human body. He said that this strategy was interesting and full of useful information. Another teacher talked



about the museum called "Miniatürk" in Turkey. She thought of explaining to the students that the historical artefacts there are  $1/25$  of their actual size. Another teacher mentioned the proportion in our body as an important point. While explaining this, he used the following sentences: " Students may have seen the concept of golden ratio for the first time. In addition, they may be encountering for the first time the ratios between fingers, between hand and elbow, between elbow and arm, each of which are equal in the golden ratio". This will enable students to communicate with each other by measuring their own bodies in the classroom and to be interested in the subject.

In the strategies for the item "**Various elements such as reading passages, exercises, pictures, videos, sounds helped me to pay attention to the lesson**", a teacher suggested the strategy of making students watch a video on YouTube, which contains interesting information about the Pyramid of Cheops. He also tried to attract the attention of the students by talking about the history of the Pyramid of Cheops and asking them which subject in mathematics they would need if they built a pyramid in the past and how they could use this subject. Another teacher suggested using technology to carry out activities related to the topic of ratio on web pages such as Wordwall and Kahoot. The number of teachers who suggested Wordwall application is the majority. The reason for this may be that Wordwall contains ready-made activities for the subject.

## ***2. IMMS Relevance Category Items Strategy Examples***

The strategies suggested by the teachers in this category were analysed to establish relationships in the subject of ratio and proportion and to enable students to give examples from daily life. The items belonging to the relevance category and examples of mathematics teachers' strategies are given below.

**"The content of this material/lesson tool was prepared according to the topics that interest me"**. Teachers suggested that they could use the relationship between mathematics and art as a topic that could attract students' attention. The strategy of forming cubes with different side lengths by folding paper and finding the ratio between these cubes was suggested.

**"In the lesson material, there were examples and explanations of how people use the information in this lesson"**. Teachers thought of conveying to students the use of ratio and proportion in different professional groups. *"The subject of ratio and proportion is a concept that is actively used in architecture, art, and painting. The Golden Ratio is used in paintings and architectural works. In addition, ratio and proportion are used in determining sales strategies in trade"*. A group of teachers aimed to show the pictures of different professional groups to the students. They aimed to brainstorm with the students

by asking the question "What do these people pay attention to while performing their professions?". For example, pictures of a housewife cooking, a civil engineer working, a pharmacist preparing medicine and a chemist conducting experiments were shown. The same group of teachers also suggested another example:

*"As can be seen from the coffee preparation table on the next page, people pay attention to certain measurements when preparing coffee. For example, espresso requires one part coffee and latte requires one part coffee and 2 parts milk. The amounts vary for each coffee. After explaining this table to the students, they can be asked how many cups of espresso are needed for 10 cups of latte."*

By using this example, they thought that reinforcement about ratio would be provided. Another teacher preferred to inform the students that proportion is used very often in daily life and that even in the simplest situations, for example when shopping in the market or greengrocer's shop, there are charges according to grams.

"I was able to relate the content of this lesson to things in my own life." For the item "I was able to relate the content of this lesson to things in my own life." For the item "I was able to relate the content of this lesson to things in my own life. The examples she gave for this explanation were: *"If a student is interested in cooking, we give them a cake recipe and ask them to find the proportions of the ingredients. Or for a student who wants to be an architect in the future, we give him/her a construction project and ask them to find the proportions of columns and beams"*. Another teacher suggested the strategy of brainstorming about where we use ratio and proportion in daily life. One of the teachers stated about the making of "Aşure", which is made only once a year in Turkey, as follows: *"When our mothers make it, they can be asked how they adjust the ingredients, and they can be asked to comment on this issue"*. Associations can be made with the elements in our culture. In another example, teachers will ask students to plan a day. To do this, she asked the students to divide 24 hours into smaller periods and explain what they did in each period. For example, eating in 2 hours, sleeping in 8 hours, etc. After this activity, many different questions can be asked, such as the ratio of the time students spend on sleeping to the time they spend on eating.

### ***3. IMMS Confidence Category Items Strategy Examples***

The items belonging to this category and examples of strategies related to mathematics teachers' confidence are explained.

**"When I first saw this lesson, I thought it would be easy for me."** For this item, one of the teachers thought that coming to the lesson with grocery products and chatting with the students would relax the students and give the impression that an easy subject would be taught. Similarly, many teachers stated that students' perspectives on the subject would become "easy" when they were given examples from situations that they could easily relate to in daily life.

For the item **"I understood this course material/tool (computer, book, etc.) more easily than I expected"**, teachers found the use of technology-supported materials appropriate. A few teachers suggested the Wordwall web page. One of the teachers who suggested the Wordwall application argued that students would be able to understand more easily if the activities there were selected from easy to difficult.

**"After reading/listening to the introductory information, I was sure what I needed to learn from this lesson"**. Most of the teachers suggested conveying the learning outcomes in the curriculum to the students in this item. They mentioned that they should be given at the beginning of the lesson, such as a what we will learn corner. One teacher asked the students to guess what they would learn while talking about the learning outcomes.

#### ***4. IMMS Satisfaction Category Items Strategy Examples***

In this category, which includes items explaining students' satisfaction and the results they obtained from the lesson, examples of teachers' strategies are listed.

**"Doing the exercises of this lesson gave me a sense of success."** To create a sense of achievement in students, a group of teachers stated, "We add questions from simple to difficult between the topics and create the self-confidence that I can do it". One teacher suggested having students play a game at the end of the topic to ensure that everyone participates and reinforces. In this way, he argued, a sense of achievement and positive emotions would arise in the students. As a strategy that involves every student in the classroom environment, a group of teachers said, *"I plan the exercise questions in the course of the lesson, which are listed as easy, medium and difficult respectively, in a way that appeals to students at all levels and ensures that all of them gain a sense of solving and achievement"*.

In the item **"The feedback (feedback/comments) after the exercises made me feel that my work paid off."**, teachers mostly mentioned that instant feedback should be given. One teacher said, *"Children like reinforcements. Therefore, it is very important to give positive reinforcement to children"*. One teacher stated that students can make mistakes and that immediate feedback

should be given to correct these mistakes. She argued that students should be given the opportunity to evaluate themselves. Similarly, another teacher explained the following: *"At the end of the exercises, motivating sentences should be said to the students, for example, it was important to solve this exercise. You have understood the subject very well and now you can easily use this subject in your life."* Another teacher found it important that students who actively participate in the lesson and succeed in the activity should be appreciated in a way to encourage other students. Encouragement can be provided by giving small gifts.

## CONCLUSION

In this study, examples of mathematics teachers' strategies for the items in The Instructional Materials Motivation Survey (IMMS) categories on ratio and proportion were given. The strategies teachers suggest in the Attention category were the majority. When the examples given are analysed, it can be concluded that teachers can create different strategies to attract students' interest in the lesson. Similarly, in the Relevance category, teachers were able to come up with strategies involving daily life situations and suggest simple situations that students could relate to. However, when the items in the Confidence category were analysed, it was concluded that the teachers did not have effective strategies to keep students engaged in the course and develop positive perspectives towards this course. It was observed that the strategies produced by the teachers in this category were minimal. It is important for teachers to improve their strategies in this area to keep students interested in the course. Similarly, in the strategies created for the items in the Satisfaction category, it was seen that teachers generally followed similar strategies to create a sense of success in students. Teachers' views on feedback are also similar. Strategies for students' evaluations are limited.

In this study, mathematics teachers only created the strategies and did not implement them with their students. In the next step, it would be important for teachers to apply the strategies they created with their students in the subject of ratio and proportion and to see the deficiencies in the relevant categories. In this way, teachers can evaluate their own strategies and work to make their lesson processes more effective. This study, in which teachers' strategies are also examined, can serve as an important guide in the process of increasing students' motivation for learning and achievement. Future studies can be applied with different subjects in mathematics course. In addition, applications with different disciplines can also be carried out.

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## CHAPTER 8

### SITUATIONAL AWARENESS IN FOREIGN LANGUAGE TEACHING

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#### **Introduction**

In classroom management, a part of the job is being aware of what is going on in the classroom while teaching at a whole class hour. Situational awareness, also commonly called ‘with-it-ness’ is usually associated with safety, emergency and security concepts as it simply means observing around carefully and being aware of or alert to everything happening around. In respect of teaching, withitness is the skill of carrying out the lesson while actively observing everything that goes around, noticing and responding quickly to unexpected situations, and paying close attention to all students’ verbal and nonverbal behaviors. Language classrooms are dynamic places where the teacher and the students have to be involved in the process, to interact with each other and engage with the target language as much as possible. In such a setting, teachers have to keep their eyes open or literally have eyes on the back of their heads to maintain a peaceful and effective teaching environment . The present study explores Situational Awareness (SA), also called the “with-it-ness”, in language classrooms through conceptual analysis that proposing ways to increase foreign language teachers’ withitness potential in language classrooms.

#### ***1. The Concept of Situational Awareness***

The concept of situational awareness has usually had a place in a variety of fields like aviation, security or military as it simply refers to the ability to observe, understand and proactively respond to the current situation to make appropriate decisions under challenging conditions. In education field, situational awareness is mostly attributed to the notion and the practices of classroom management where classroom dynamics like controlling the process of effective teaching and controlling student learning and behaviours during the teaching activity. Other perspectives also relates Situational Awareness as a strategy to overcome learning difficulties (Da Savioa, 2014). In respect of teaching and teachers in a classroom environment, Green (2023) defines situational awareness as “actively observing

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everything going around you, not just what is directly in front of you and being oblivious to everything else” (p.1).

## **2. Kounin’s “Withitness” Model**

The term ‘withitness’ in teaching was first suggested by Kounin in 1970, in his book titled "Discipline and Group Management in Classrooms" in which he emphasized significant strategies and skills to improve for providing effective classroom management during teaching. Main idea of his perspective was to promote how teachers manage their students and teaching processes effectively. The teacher withitness refers to be aware of what is happening all around the classroom at every minute of the lesson, in fact students also need their teacher to be aware of what is going on in the classroom. According to Kounin’s perspective, when students are off-task, the teacher should make his/her students sure that he or she is fully aware of they are not working and that they need to become engage immediately.

Classroom practices of “withitness” include:

- Continually being alert to the myriad of sights and sounds in the classroom
- Arranging the classroom so that all students are always within eyesight
- Scanning the room periodically when working with individuals or small groups of students
- When helping an individual student, the teacher faces the rest of the class
- Briefly acknowledging student misbehavior at first detection to let the student and the class know that the teacher is aware, thus preventing an escalation of the misbehavior (<https://www.scribd.com/document/101530032/What-is-Withitness>)

Withitness also suggests the effective use of eye contact, asking individual and group questions, constant moving around the classroom randomly and especially foreseeing and stepping in some unwanted student behaviors, thus, redirecting students to prevent misbehavior (<https://www.scribd.com/document/101530032/What-is-Withitness>).

## **3. Withitness in EFL Context**

The nature of foreign language classrooms has always had a dynamic potential as language learning itself is a active, engaging, interactional and communicative process. This energetic atmosphere of teaching the target language in a classroom within a limited period of time is both an opportunity for productive learning and challenging for teachers to handle the process effectively. The classroom

management in language teaching therefore has a particular importance as stated below:

“role that the teachers play in classroom and the classroom management strategies they adopt have a strong potential to positively and effectively influence students achievement and learning. Additionally, the teachers’ effectiveness in teaching is evaluated through their ability to effectively manage the classroom and create the classroom climate that is stimulating, energizing, and positive for language learning.”

(DeLong & Winter, 1998; Brown, 2007; Underwood, 1991, cited in Aliakbari &Heidarzadi, 2015, p. 2).

The concept of SA and practical implications withitness approach provide solutions to for EFL teachers to carry out their teaching effectively and peacefully. Most of the work of language teachers in a language classroom includes to engage students with the target language as much as they can and facilitate learning it. To achieve these goals, useful and appropriate materials and language teaching and learning techniques are practiced through a good lesson plan in a well-organized and weel-structured classroom setting with a good rapport and carefully managed process. The teacher withitness techiques that are likely to be useful and efficient in EFL teaching are as follows:

- Using eye-contact and body language effectively,
- Moving around the classroom randomly and intervally rather than sitting at
- Acknowledgeing students (i.e., knowing their names, general personal traits, strengths and weaknesses, etc.) is good for creating a good rapport and make students predictable and cooperative. Paying attention to students’ emotions may predict and prevent unwanted situations,
- Setting the classroom seating adequately, U-shape model is useful to provide a general sight to see each student,
- Observing the classroom simultaneously with teaching, anticipating and controlling student misbehavior,
- Paying attention to timing of the overall lesson; spending equal and appropriate time for student questions and requests, controlling the pace of the lesson (games, role-plays can be energetic and fast while more controlled exercises like question-answer, gap-filling, word recognition may take more time for students to internalize the content)

- Directing pair-group or whole class works and activities appropriately, especially in crowded classes,
- Organizing and practising language tasks and activities appropriately, instructions should be clear and precise, transition between different tasks or activities should be smooth and direct,
- Carrying out skills teaching considering their dynamics; for instance, though integration of skills are recommended strictly in EFL teaching, studying speaking skill needs more interactive and communicative setting than a reading or writing focused lesson, so maintaining the noise control and energetic behaviors are crucial,
- Developing multi-tasking skills; take attendance quickly while observing the general atmosphere and start the warm-up, end a task passing through follow-up phase, etc. may prevent wasting time and losing control.

### **Conclusion**

Although language classrooms have potential to produce some issues for language teachers, developing withitness skills in addition to the ability to carry out a lesson to facilitate learning a target language is a way to minimize possible problems and maximize solutions to problematic situations. In fact, constant effort on situationally aware of what is going on in the classroom during teaching is a negativity as being overwhelming for foreign language teachers. Further, continuous and proactive practising of situational awareness-teacher withitness provide more accomplishable and worthwhile results.

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