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Exploring Teacher's Professional Identity in Relationship to Leadership: A Latent Profile Analysis

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Abstract: As a result of the COVID-19 outbreak, which has affected the whole world, teacher leadership has gained more significance. Teacher leadership is a multidimensional concept. While some teachers exercise leadership only at the classroom level, others exercise leadership at a macro level. This level of leadership enactment is directly related to how teachers construct their professional identity in relation to leadership. This study aims to explore the leadership-related professional identities of teachers who came to the fore, especially during the COVID-19 pandemic period by using latent profile analysis. The data were collected from a sample of 710 teachers. Teachers completed the Teacher Leadership Behavior Scale, which measures teacher leadership behaviors at four levels: classroom, parental, micro-level, and macro-level. Participants also completed the Rosenberg self-esteem scale, the teacher self-efficacy scale, the openness to authority scale, and the job satisfaction scale. As a result of latent profile analysis, three distinct profiles of teacher leadership identity emerged: those who exercise leadership at a minimum level, an intermediate level, and a maximum level across all four levels of teacher leadership. These profiles were labeled as "restricted professionality", "intermediate professionality", and "extended professionality", drawing upon Hoyle's conceptualization of teacher professional identity. These findings suggest that teachers construct their identities differently regarding teacher leadership. It is essential for school leaders to first explore the different levels of professional identity and tailor their professional development activities accordingly.

Keywords: teacher leadership; COVID-19; teacher professional identity; latent profile analysis; school improvement

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1. Introduction

Although principal leadership is regarded as the most central to school improvement [1], there are many other sources of leadership within schools that could equally contribute to school improvement. One of these important sources is teacher leadership. The importance of teacher leadership has been better understood, especially with the transition to distance education during the COVID-19 pandemic. Therefore, there has been a growing interest in teacher leadership among scholars and practitioners alike [2–4]; since teacher leaders are critical in reforming schools [5]. In today's ever-changing world, where student learning is beyond the responsibility of one teacher [6], teacher leadership is more important than ever. Student needs are becoming more diverse and differentiated every day, and this situation was better understood during the COVID-19 pandemic [7]. There is also enough empirical evidence in the literature that teacher leadership has a significant impact on student outcomes [8–10].

Despite the increasing interest in teacher leadership lately, with the contribution of the above-mentioned situations, the concept still remains ambiguous [11]. Most studies on teacher leadership are atheoretical [4]. Furthermore, there is no agreed-upon definition [12].

Teacher leadership is defined in terms of roles and responsibilities [13], formal positions [14], functions [15], worldviews [16], stance [11], moral agency [17] or influence [4]. However, the succinct definition provided by Wenner and Campbell [18] reflects the essence of most definitions: "maintaining K-12 classroom-based teaching responsibilities, while also taking on leadership responsibilities outside of the classroom" [18]. This definition, however, does not specify how teachers take on leadership responsibilities beyond the classroom.

Teachers exercise leadership outside of their classrooms in three different forms: formally, informally, and in a hybrid form. Within the formal form of teacher leadership, leadership is viewed as a role-based practice [14], where teachers are given a formal position and are expected to lead change by serving in that role. In contrast, within the informal view, leadership emerges spontaneously from the teacher ranks [19]. All teachers can exercise leadership regardless of their position [20]. Frost [17] refers to this approach as "non-positional teacher leadership". Leadership is an entitlement for every teacher, regardless of their formal roles or positions [21]. It draws on teachers' moral purpose and agency [16]. In the hybrid form, teachers teach part-time and support colleagues at other times [22].

Silva et al. [23] described three distinct waves of teacher leadership and argued that teacher leadership evolved from formal positions to the re-culturing of schools over time. In the first wave, teachers were given formal roles and were expected to exercise leadership in that role. In the second wave, teacher leadership entailed sharing pedagogical expertise with colleagues. In the third wave, teacher leadership involved the re-culturing of schools where teachers collaborated and learned collectively. The third wave is still emerging [5]. Berry et al. [24] added a so-called fourth wave to this conceptualization [16], which they called "teacherpreneurs". In the new fourth wave, teachers stay in the classroom but also develop their own ideas and execute them just like entrepreneurs. Teacher leadership is evolving from formal positions (the first wave) to a more informal approach (the fourth wave) [25].

The issue with the formal view of teacher leadership is that leadership is regarded as "additional" rather than "a part of" teachers' daily work [23]. If teacher leadership is defined in terms of positional authority, not all teachers see themselves reflected in that "leader" image [26]. Then, a critical source of leadership is lost in school improvement. Leadership is a matter of teachers' agency and their commitment to initiating and leading change [27]. As Berry et al. [28] argue, in today's educational system, all teachers need to lead one way or another. Then, the challenge becomes as follows: how can we enable every teacher to exercise leadership? In order to answer this question, we first need to understand the antecedents of teacher leadership. How are teacher leaders different from those who do not exercise leadership? What motivates a teacher leader to exercise leadership?

Researchers have been trying to understand the antecedents of teacher leadership in recent years [29]. Schott et al. [3] have identified antecedents at three different levels: teacher, school level, and supra-school level. One of the most important determinants of teacher leadership at the teacher level is teachers' professional identities. Some scholars even argue that the biggest barrier is often the lack of a teacher's leader self-perception since some teachers have difficulty viewing themselves as leaders [30]. Even if all the enablers are in place, such as supportive organizational structure, school culture, and principal, in order to exercise leadership, teachers must "first perceive themselves as leaders" [31]. If teachers view themselves only as teachers, which [32] refers to as "I am just a teacher syndrome", they will not view leadership as a legitimate part of their professional roles [27]. Ref. [30] studied the process by which teachers learn to be teacher leaders, and she found that the key enabler for the progression was "self-perception". Therefore, in order to foster and support teacher leadership in schools, the first and most critical step is to explore teachers' professional identity and assess to what degree they view leadership as a dimension of their professional identity. Below we discuss teachers' professional identities in relation to leadership.

1.1. Teacher Professional Identity

There has been increasing research interest in the concept of teacher professional identity over the last 40 years [33]. It has become the fundamental aspect of research on teaching worldwide [34], since it affects the performance and decisions of teachers in most domains [35–37]. It is an organizing principle in teachers' lives [38] and a lens through which teachers make sense of their roles [39]. In short, professional identity stands at the core of the teaching profession [40,41].

Although professional identity is widely researched, the concept is defined differently [42], and there is no consensus on its definition [43]. In particular, the distance education process during the COVID-19 pandemic and the hybrid education approach afterward have brought new definitions to the professional identity of teachers. However, the succinct definition provided by Beijaard, Meijer, and Verloop [42] reflects the essence of most definitions: a set of views teachers hold about themselves as professionals. Hoyle [44], one of the most influential scholars in the field, used the term "professionality" to refer to teachers' professional identity. Hoyle and John [45] define professionality as "that set of knowledge, skills, values, and behaviors, which is exercised on behalf of clients" (p. 16). It refers to teachers' interpretations of their work and their orientations towards their work [46]. It concerns how teachers construct their own professional identities [47]. It is important to analyze and understand a teacher's professional identity [46] because individuals act congruently with their identity [48]. For instance, regarding teachers' integration of new technology, Lai and Jin [49] found that the adoption of new technology by teachers is directly related to the construction of their professional identity. Teachers who adopted an educator (vs. instructor identity) were more likely to adopt new innovations. Similarly, Liu and Geertshuis [50] found that professional identity was influential in the adoption of a Learning Management System (LMS). Teachers who were student-focused were more likely to adopt LMS.

Teachers construct their professionality in different ways in different arenas of education: face-to-face, distant, or hybrid. It is possible to see various categorizations in the literature. For instance, regarding "teacher roles" within the classroom, Beijaard et al. [35] discuss teachers' professional identity in terms of three roles: a subject matter expert, a pedagogical expert, and a didactical expert. Van Veen et al. [46] have distinguished two professional orientations regarding the goals of education: an instructor orientation to advance qualification and an educator orientation to advance personal and moral development. Professional identity also directly influences teachers' orientation towards leadership, which we discuss below.

1.2. Teacher Leadership and Extended Professionality

Regarding teacher roles in the school as a whole, Hoyle [44] describes two different orientations: restricted professionality and extended professionality. Hoyle's [44] influential distinction between "restricted professionality" and "extended professionality" influences how teachers construct their professional roles in terms of leadership. Teachers with "restricted professionality" are mostly oriented to their own classrooms, whereas teachers with "extended professionality" go beyond their classroom walls and orient to the whole school [44]. Teachers with "restricted professionality" are more concerned about the subject matter and teaching in the classroom, whereas teachers with "extended professionality" focus on the school as a whole [46]. Teachers with "restricted professionality" feel responsible for their own students, whereas teachers with "extended professionality" see the development of students as the joint responsibility of all teachers [6]. Teachers with "extended professionality" engage with issues from a broad social and political frame [16] and locate classroom practice within a larger social framework [51]. Teachers with "extended professionality" are happily collegial [51].

When Hoyle [44] proposed this distinction, there was no empirical evidence, but later studies provided empirical evidence to support this conceptualization. Teachers with "extended professionality" are more likely to exercise leadership to contribute to

school improvement and take responsibility for innovation, especially during times such as the COVID-19 pandemic. Jongmans et al. [52] have found teachers with an extended professional orientation are more collegial. Van Veen et al. [46] found that teachers with extended professionality are more likely to engage in collaboration. Jongmans, Biemans, and Beijaard [52] have demonstrated that teachers with "extended professionality" were more involved in policy making. It could be argued that teachers were involved in life-changing decision-making processes during COVID-19. An important finding of these studies was that these teachers did not ignore their classrooms. They extended their professionality beyond the classroom. These studies clearly demonstrate that leadership is a crucial dimension of extended professionality. Some teachers may not view leadership as part of their professional identity [53]. Some teachers see their role only in terms of the classroom [54].

Leadership is simply a dimension of what it is to be a professional, a form of professionality that is maximally agential [17]. Becoming a teacher leader is a process of adopting a leadership stance, a way of being a teacher, a worldview, and a habit of mind—leading here and then [16,55]. For instance, Lieberman and Friedrich [56] described the process in the National Writing Project as acquiring "a leadership identity." Frost [20] called for enabling all teachers to enact extended professionality since it is directly related to teacher leadership. Then, leadership programmes for teachers should be about developing their leadership identity since extended professionalism is a key condition for teacher quality and student outcomes [57,58]. Unfortunately, offering workshops to update teachers' knowledge will add little if teachers do not have an extended professionality. Therefore, teacher leadership development programmes should extend teacher professionality. The first step is to discover where teachers are in terms of their professionality and then enable teachers to adopt a leadership identity. To the best of our knowledge, no study has tested Hoyle's distinction between restricted professionality and extended professionality in Turkish settings. The purpose of our study is to explore teachers' professionality in relation to teacher leadership in Türkiye, using Hoyle's distinction using latent profile analysis.

2. Methodology

2.1. Design

This study used a cross-sectional design that aimed to identify the latent profiles of teacher leadership after the COVID-19 pandemic using latent profile analysis (LPA). Four factors of teacher leadership behaviors (classroom leadership, parental leadership, micro-level leadership, and macro-level leadership) were used to determine the latent profiles. Various fit indices were utilized to decide the number of profiles [59], and the model that best fits the data was selected.

2.2. Participants and Sampling Procedure

The data for this study were collected from a total of 710 teachers who were affiliated with schools situated in various parts of Turkey. Among the participating teachers, 263 participants (37%) were male, 402 participants (56.6%) were female, and data from 45 (6.3%) were missing. Their ages ranged from 22 to 65 years, with an average age of 42.3 (SD = 8.8). On average, teachers had 18 years of experience (SD = 9.3). In terms of teaching level, 45 participants (6.3%) were from preschool, 172 participants (24.2%) were from primary school, 242 participants (34.1%) were from middle school, and 204 participants (28.76%) were from high school. The data for 47 (6.6%) were missing.

2.3. Research Instruments

Participants completed the Teacher Leadership Behavior Scale [60]. The scale with a high level of validity and reliability (Cronbach's alpha = 0.93) consisted of 17 items and four factors to measure teachers' behavior at four levels. Cronbach's alpha for classroom leadership was 0.78; for parental leadership, it was 0.89; for micro-level leadership, it was 0.90; and for macro-level leadership, it was 0.91. "Classroom leadership" (sample item: I

help my students to discover themselves) and "parental leadership" (sample item: I am always in communication with parents for the benefit of my students) were characteristic of "restricted professionality", and "micro-level leadership" (sample item: I offer advice and suggestions to my colleagues) and "macro-level leadership" (sample item: I am involved in the decision-making process at school) were characteristic of "extended professionality".

Additionally, participants completed the job satisfaction scale (five items) [61]. For Cronbach's alpha of 0.91, a sample item is as follows: I find real enjoyment in my work. Participants completed the teacher self-efficacy scale (five items) [62]. This scale measures whether teachers feel self-efficacious in their teaching abilities. A sample item is as follows: I am certain that I can make a difference in my students' lives. For these three scales, responses were provided on a 5-point Likert scale, ranging from 1 (definitely disagree) to 5 (definitely agree).

Participants completed a short version of the Rosenberg self-esteem scale [63] consisting of six items (Cronbach's alpha = 0.82). The scale measures participants' level of self-esteem. This short version was developed by Bolat and Antalyalı [64] and demonstrated high levels of validity and reliability. A sample item is as follows: Overall, I am satisfied with myself. Participants completed the openness to authority scale (three items) [64]. This scale measures the extent to which teachers express their ideas to authority figures (Cronbach's alpha = 0.92). A sample item is as follows: I can freely express my ideas to my superiors when I do not agree with them. For these two scales, responses were provided on a 7-point Likert scale, ranging from 1 (definitely does not define me) to 7 (definitely defines me).

2.4. Data Analysis

Latent profile analysis was used to determine the profiles of teacher leadership. The R package (v. 4.0.2) [65] and "tidyLPA" package program were used to identify latent profiles [66]. For data screening and descriptive analysis, IBM SPSS-26 was used [67]. LPA analyzes individuals' latent profiles based on observed variables, also known as dependent variables. Based on the specified continuous variables, the most probable profile to which an individual belongs is identified. In LPA, instead of assigning individuals to any specific group, it estimates the probability of membership in a group [68]. LPA allows for the analysis of variables using measures such as means, variances, and covariances. The first stage in determining latent profiles is the model selection where 4 different models (Models 1, 2, 3, and 6) are tested. In addition to selecting the model that fits the data the best, the number of profiles is also explored [69]. By comparing the obtained fit indices, the number of profiles is determined. The most commonly used fit indices used for the number of profiles are the Bayesian Information Criterion [70], Akaike Information Criterion [71], and SABIC. Lower values are better for model fit [72]. The entropy measure, which reveals unexplained cases in classification, was utilized to assess the quality of classification, where an entropy value close to 1 is perfect, a value above 0.80 is desirable and a value above 0.60 is the minimum value that is accepted [59,73]. It is essential to choose the most concise model and ensure that none of the profile solutions have a small profile size of less than 5% of the total sample [74].

Afterward, the independent variable of profile membership was utilized in a series of one-way analysis of variance tests to assess whether there were significant differences in the scores of job satisfaction, teacher self-efficacy, self-esteem scale, and openness to authority among the identified groups. The data were analyzed using IBM SPSS-26.

3. Results

3.1. Correlations

The interrelationships among four teacher leadership behavior factors (classroom leadership, parental leadership, micro-level leadership, and macro-level leadership), job satisfaction, teacher self-efficacy, self-esteem, and openness to authority were calculated and are presented in Table 1. There was a high correlation among all scores.

Table 1. Correlations of variables.

Variable	1	2	3	4	5	6	7	8
1. Classroom leadership	—							
2. Parental leadership	0.53 ***	—						
3. Micro-level leadership	0.51 ***	0.45 ***	—					
4. Macro-level leadership	0.52 ***	0.54 ***	0.64 ***	—				
5. Job satisfaction	0.40 ***	0.33 ***	0.31 ***	0.38 ***	—			
6. Teacher self-efficacy	0.50 ***	0.42 ***	0.37 ***	0.46 ***	0.51 ***	—		
7. Self-esteem	0.45 ***	0.36 ***	0.37 ***	0.37 ***	0.50 ***	0.53 ***	—	
8. Openness to authority	0.36 ***	0.28 ***	0.32 ***	0.45 ***	0.29 ***	0.33 ***	0.44 ***	—

*** $p < 0.001$.

3.2. Profiles of the Teacher Leadership Behaviors

Latent profile analysis was performed, and the results are presented in Table 2, which includes fit statistics for the different models. By comparing the obtained fit indices, the number of profiles was determined. Different fit indices were used to determine the profiles. Akaike [71] recommends the Akaike Information Criterion (AIC); Schwarz [70] recommends the Bayesian Information Criterion (BIC). According to Bauer [72], the lower the values, the better the model fit. The bootstrap likelihood ratio test (BLRT) was preferred over k-1 classes [75]. The information about classification accuracy was condensed in the entropy measure, which revealed unexplained cases in classification [59]. According to Asparouhov and Muthén [73], an entropy value close to 1 indicates a small number of unexplained cases in classification values, values ≥ 0.80 are desirable, and values ≥ 0.60 are the suggested minimum. Based on the suggestion of Akogul and Erisoglu [59], the Approximate Weight of Evidence (AWE), Kullback Information Criterion (KIC), and Classification Likelihood Criterion (CLC) values were calculated. It should be noted that besides statistical analysis, theoretical expectations were considered in determining the profiles [76]. It was ensured that none of the profiles had a class size of less than 5% of the total sample [74]. As depicted in Table 2, the values of AIC, BIC, and SABIC are lower for the three-profile model, indicating a good solution. Furthermore, Models 1, 2, and 3 ensured that the smallest profile was no less than 5% of the sample size. The higher entropy during the transition from other profiles to a three-profile solution indicated that the three-profile solution was superior to alternative solutions. The BLRT tests yielded highly significant values ($p < 0.01$), further supporting the selection of the three-profile model. Based on these results, the three-profile model was the most suitable and best-fitting model for the data. Based on the fit indices and the objective of latent profile analysis, we determined that the 3-profile was more appropriate.

Table 2. 1–4 profiles for teacher leadership behavior in Türkiye.

The Number of Profiles	BIC	AIC	AWE	CLC	KIC	SABIC	Entropy	BLRTP	Profile Size	Sample < 5%
1	6888	6852	6963	6838	6863	6863	-	-	710	No
2	6224	6165	6347	6140	6181	6183	0.77	$p < 0.01$	447, 263	No
3	6018	5936	6189	5902	5957	5961	0.80	$p < 0.01$	341, 54, 254	No
4	5956	5851	6175	5807	5877	5883	0.78	$p < 0.01$	316, 11, 104, 279	Yes

The teachers were categorized into three profiles after the analysis. Profile 2 represented the smallest group, consisting of 54 teachers and accounting for 8% of the total sample. This group exhibited the lowest average scores across all four teacher leadership behavior factors (classroom leadership, parental leadership, micro-level leadership, and macro-level leadership) and was identified as teachers with "restricted professionality". Profile 1, on the other hand, was the largest group, comprising 341 teachers, which repre-

sented 48% of the sample. This group exhibited the highest average scores across all four teacher leadership behavior factors and was identified as teachers with "extended professionality". Lastly, Profile 3 consisted of 315 teachers, accounting for 44% of the sample. This group demonstrated moderate scores across all four teacher leadership behavior factors and was identified as teachers with "intermediate (moderate) professionality". Figure 1 displays the plot illustrating these three profiles.

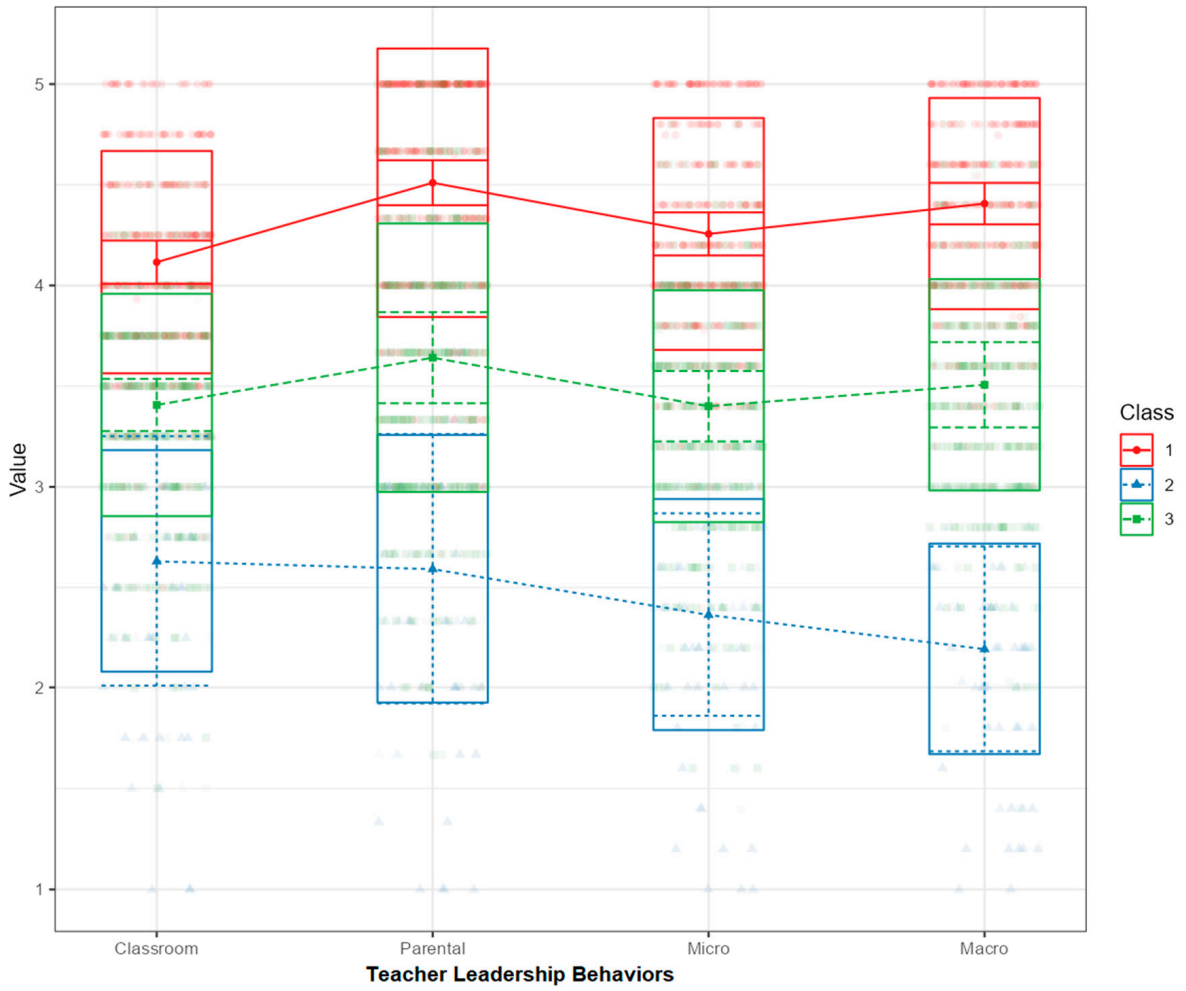

Figure 1. Three latent profiles of teacher leadership (N = 710).

3.3. The Univariate Analysis of Job Satisfaction, Teacher Self-Efficacy Self-Esteem Scale, and Openness to Authority of Teachers

The purpose of employing one-way ANOVA tests was to assess whether there were differences in the average scores of job satisfaction, teacher self-efficacy, self-esteem, and openness to authority scales among the identified profiles. The post hoc Scheffe tests were subsequently applied and yielded significant results ($p < 0.001$). The results revealed that the extended professionality profile exhibited the highest level across all four measures, whereas the restricted professionality profile displayed the lowest level. The intermediate professionality class fell in the middle range of all measures (Table 3).

Three profiles were validated since teachers in three different profiles significantly differed from each other in terms of their scores on self-esteem, openness to authority, job satisfaction, and teacher self-efficacy.

Table 3. ANOVA for job satisfaction, teacher self-efficacy, self-esteem scale, and openness to authority scores.

Variables	Class	Mean Score	Df	F	*p*	Eta Squared
Job Satisfaction	extended professionality	4.1946	2	62.793	0.000 ***	0.151
	restricted professionality	3.1751				
	intermediate professionality	3.7845				
Teacher Self-Efficacy	extended professionality	4.1232	2	96.071	0.000 ***	0.214
	restricted professionality	3.2871				
	intermediate professionality	3.7249				
Self-Esteem Scale	extended professionality	5.9521	2	72.733	0.000 ***	0.171
	restricted professionality	4.8564				
	intermediate professionality	5.2757				
Openness to authority	extended professionality	5.5626	2	61.263	0.000 ***	0.148
	restricted professionality	4.0079				
	intermediate professionality	4.6150				

*** $p < 0.001$.

4. Discussion

This study aimed to explore teachers' professionalism in relation to teacher leadership using latent profile analysis in the aftermath of the COVID-19 pandemic. For the analysis, we used Hoyle's [44] influential distinction between "restricted professionality" and "extended professionality" as a framework. Our study was based on the argument that the most important antecedent of teacher leadership is teachers' professional identity, which Hoyle [44,51] calls "professionality".

We used the teacher leadership behavior scale, developed by Bolat [60], to measure teacher leadership. We chose this scale because this scale measures teacher leadership, not at a unidimensional but at a multidimensional level. Some teachers exercise leadership only at the classroom level, whereas others lead at the micro-level (among colleagues) or macro-level (involving the entire school community). This scale represents this multidimensionality. The scale consisted of four factors that measure teacher leadership at four levels: classroom leadership, parental leadership, micro-level leadership, and macro-level leadership. We additionally used four other scales to validate the profiles: the Rosenberg self-esteem scale, the teacher self-efficacy scale, the openness to authority scale, and the job Satisfaction scale. As a result of latent profile analysis, three distinct profiles of teacher leaders emerged: those who exercise leadership at a minimum level across all four levels, those who demonstrate an intermediate level of leadership across all four levels, and those who exhibit a maximum level of leadership across all four levels. These profiles were labeled as "restricted professionality", "intermediate professionality", and "extended professionality", drawing upon Hoyle's [44] conceptualization of teacher professionality. The profiles were also found to differ in terms of self-esteem, job satisfaction, teacher self-efficacy, and openness to authority. This finding is in line with Hoyle's distinction, but there were significant differences.

Extended Professionality Profile in our study is perfectly in line with the concept of "extended professionality" proposed by Hoyle [44]. Teachers in this profile focus both on their classrooms and the school as a whole. They feel responsible both for their own students and for students in the whole school. This was also the case with the Extended Professionality Profile within our study. We expected that teachers with extended professionality would score high on all measures, which was our finding. Teachers with extended professionality did not downplay their role in the classroom while focusing on school improvement. Teachers within the Extended Professionality Profile exercised leadership within the classroom and within the whole school. This study provided empirical evidence for the concept of extended professionality. This finding is also consistent with the findings of Clement et al. (cited in [46]) who describe teachers' professional concerns in

terms of three categories: self-concern, task-concern, and other-concern. Self-concern and task-concern focus on the classroom, while other-concern refers to what teachers do with or for others as a member of a school community. Teachers with extended professionality are more other-concerned. The profiles in our study reflect the profiles Clement et al. (cited in [46]) found in their studies.

Restricted Professionality Profile in our study, however, had different characteristics than what Hoyle [44] suggested. Hoyle suggested that teachers with restricted professionality are mostly oriented to their classroom responsibilities rather than the whole school, are more concerned about teaching in the classroom rather than the general quality of teaching in school, and feel responsible for only their own students rather than all students [44,46,51,52]. However, in our research, we found that teachers with restricted professionality were not only unconcerned about the whole school, but also their own classrooms, the development of their students, or parental involvement. They scored low on all four factors of teacher leadership. We could argue that they were disengaged from the educational process in general. Two factors, i.e., classroom leadership and parental leadership, included items such as the following: I learn about the inner world of my students; I help my students discover themselves; I develop the talents of my students; I collaborate with parents for the development of my students; I learn the family lives of my students. Teachers with restricted professionality scored low on these two factors. We expected that teachers with restricted professionality would score low on the micro-level and macro-level leadership, but high on classroom leadership and parental leadership. However, this was not the case in our research. This was a key distinction from Hoyle's conceptualization. Hoyle [51] warned in later publications that the term "restricted professionality" should not carry a negative connotation and that teachers with "restricted professionality" could be excellent teachers. It is just that the scope of professionalism was restricted [51]. The professionalism of teachers in our study also restricted professionalism. Teachers with restricted professionality also scored very low on all other measures. In other words, they had a lower level of self-esteem, were less satisfied with their jobs, felt a lower level of self-efficacy in their classroom, and had difficulty expressing their ideas to their superiors.

The present research was unique in that it extended Hoyle's conceptualization by adding a third dimension, "intermediate professionality", to the existing distinction between "extended professionality" and "restricted professionality". Teachers with "intermediate professionality" exhibited moderate scores across all four teacher leadership behavior factors. This finding could suggest that these teachers could be going through a process. Smulyan [16] explains that in the formation of leadership identity, teachers move through three waves: teacher leadership as behaviors and skills, teacher leadership as a process, and teacher leadership as stance. The teachers with "intermediate professionality" could be in the "process" of becoming teacher leaders, in a transition from perceiving teacher leadership as behaviors to viewing it as a stance.

Suggestions and Future Directions for Research

Teachers with restricted professionality scored low on self-esteem, job satisfaction, self-efficacy, and openness to authority measures. One study found that teacher leadership contributes to greater satisfaction in the classroom [77]. However, it is not clear which leads to which, that is, whether teacher leadership is the cause or the effect of job satisfaction. Similarly, however, it was not clear in our studies that these four variables are the causes or the effects of restricted professionality. Experimental studies are needed to test the effect of these four concepts on teacher leadership. School leaders first need to understand and explore teachers' conception of their own professionality and design professional development activities tailored differently for each type of professionality. School leaders also need to understand that support at the cultural and structural level of the school will not foster teacher leadership unless teachers develop extended professionality and perceive themselves as leaders [31]. This is a gradual process where teachers add additional roles

and images to their professional identity over time [78]. School leaders need to know that identity development is dynamic and an ongoing process [34].

This study has certain implications for school leaders. School leaders need to support teacher leadership for effective school improvement. As this study demonstrates, to foster teacher leadership, teachers' professional identity needs to develop. Teacher leadership programmes designed by school leaders should directly focus on developing teachers' identities. Unless teachers change their professional identity from a restricted stance to an extended stance, improvement in other areas of school systems will not promote teacher leadership. For instance, even if teachers are given additional time for leadership activities, a teacher who does not see himself/herself as a leader will not exercise leadership. Secondly, besides designing teacher leadership programmes, school leaders should design a school culture where there are opportunities for conversation, discussion, and reflection among teachers since these practices help the development of a leadership stance in an organic way [16] and help teachers extend their professionality. Extended professionalism cannot be developed unless teachers are engaged in interaction with other professionals [36]. Colleagues are often the key actors in teachers' formation of professional identity Cohen [79]. In short, school leaders need to be strategic in designing intervention programmes and school cultures to directly address teacher professionality.

In one study, teacher leaders who participated in a leadership cohort for three consecutive years revealed that their conceptions of teacher leadership evolved over time from a set of behaviors and skills to a commitment and ongoing process across many contexts, to a way of thinking and positioning oneself within the field of education [16]. The intermediate group can be linked with teacher leadership as a process. Policy makers could design teacher leadership programmes to change teachers' professional identities. Many programmes, such as the Great Lakes Academy [31], the International Teacher Leadership Program [80], and The Teacher Leadership for School Improvement (TLSI) [81], were successful in changing teachers' conception of identity. When times such as the COVID-19 pandemic come again, teachers with extended professionality can greatly contribute to effective decision making in educational settings.

This study has certain limitations. The data were collected online. The same study needs to be replicated with the data collected in a face-to-face setting. Another limitation of the study is that it might be difficult to generalize the findings to different samples. Furthermore, these profiles, explored through a statistical technique, may not represent natural groupings in real school settings. This study needs to be replicated with a different sample and, if possible, in different cultures. Furthermore, these findings need to be validated with qualitative data.

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