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A System-Based Approach to Expert Assessment Work-Exploring Experiences among Professionals in the Norwegian Educational Psychological Service and Schools

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ABSTRACT

The focus of this Q methodological study was to explore how professionals in the Educational Psychological Service (EPS) and schools experienced a system-based approach to expert assessment work. Forty informants from the EPS and schools sorted 60 statements about the assessment process. The following two shared viewpoints were identified: (1) teacher-focused EPS advisers and (2) principal-focused EPS advisers. While the two groups of EPS advisers seem to approach the school via either the teacher or the principal, joint collaboration on developing knowledge during the assessment process seems scarce in both viewpoints. The students' experience with school life is the least emphasized. Challenges related to collaboration on developing expert knowledge between the EPS and the student, teacher and principal are discussed. Three practical implications for the realization of a system-based approach to expert assessment work are suggested and further linked to implications for understanding and interpreting EPS's statutory task.

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Introduction

In Norway, the Educational Psychological Service (EPS) is a mandatory division of municipalities; it is funded to help schools make the necessary adjustments to best serve students with special educational needs. When the EPS was established in 1948, its task was to identify students who could not follow the standard curriculum (Nordahl, 2018). Gradually, and consistent with increased emphasis on integration, the focus changed from direct treatment and diagnosis to guidance on how schools could integrate special education within their standard curricula. Since the introduction of students' right to special education in 1976, the EPS represents the experts who assess students' needs for special education. The assessment shows whether a student needs special education, specifies the student's difficulties and provides reasons for the student's lack of success with ongoing schooling. The assessment report is expected to guide schools to offer the student a more beneficial education (The Ministry of Education and Research, 2014). Since the introduction of system work in 1998, competence building and organizational development work in schools became a part of EPS's mandate (Opplæringslova [The Education Act], 1998, § 5.6). This change implied a stronger focus on EPS's contribution to school development, with the goal of creating inclusive schools for all students (The Ministry of Education and Research, 2017). Currently, more than twenty years later,

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there is a public debate regarding whether EPS's work supports the values of inclusive schools (Nordahl, 2018; The Norwegian Ombudsman for Children, 2017).

The introduction of system work advanced new perspectives and challenged the traditional way the EPS worked in schools. Research across sectors has shown that enacting change that requires changes in people's work behaviour is demanding (Amarantou et al., 2018; Coburn, 2001; Honig, 2006; Sarason, 1996; Spillane et al., 2006). Corresponding findings regarding EPS's implementation of the changed mandate have been reported (Idsøe, 2007). A recent review covering the 2000–2015 period suggested that the implementation of system work in the EPS is still a challenge (Moen et al., 2018). The researchers identified 24 relevant publications related to the following three themes: systemic work behaviour and professional identity, specific problem areas and expert assessment and collaboration and users' experiences.

The six studies related to the theme-specific problem areas and expert assessments all addressed how the EPS managed specific problems, such as minority-language problems and socio-emotional challenges. Furthermore, in three studies, the researchers problematized the lack of focus on contextual matters (Moen et al., 2018). The lack of system focus was also evident in a study of assessment reports from the EPS service, which suggested that the expert assessment process still heavily depends on psychometric tests and diagnoses (Tveitnes, 2018). Previous research on the EPS thus shows the need for more knowledge about a holistic approach to the expert assessment task, where system work integrates with the expert assessment work.

A System-Based Approach to Expert Assessment Work

A holistic approach integrates system work with expert assessment work (Hustad et al., 2013; Midtlyng, 2009). Such an approach is based on the fact that the student and the context in which the student performs are in a dynamic and interactive relationship (Cameron et al., 2011; Hustad et al., 2016). Based on this interaction, the student's prerequisites in his/her interaction with the environment governs the type of support the student needs (Haug, 2017; Mitchell, 2014). Thus, the actual student's challenges are not perceived as merely an individual problem but also as an implicit expression of the role the school system plays in facilitating learning and real participation for all students (Dale, 2008).

This relational perspective regarding support and support needs is expressed in the bioecological perspective of human development, which emphasizes the equal importance of individual prerequisites, biological and psychological factors, and environmental factors. Thus, learning difficulties are explained as a mismatch between the demands of the context and the student's ability to meet such demands (Bronfenbrenner, 2005; Bronfenbrenner & Morris, 1998). Therefore, when arranging a plan for an individual student, it is especially important to focus on how the actual student experiences the school situation as a starting point for the further improvement of the learning environment. Furthermore, the salutogenic model can be used to highlight the actor perspective in the bioecological development model by focusing on coping as a key factor in learning (Antonovsky, 1987). According to this perspective, a sense of coherence contributes to coping and prevents stress because the student understands the situation and has confidence in his or her ability to find a solution that seems meaningful. Predictability, co-determination and participation in the design of auxiliary interventions are regarded as key concepts in this theory (Antonovsky, 1979, 1987). Accordingly, the student's experience of his learning in this particular learning environment is the starting point for developing a special educational plan.

This calls for routines in which students' perspectives are considered. Research from other areas has pointed to the importance of addressing the child directly to obtain valuable information regarding his situation by combining pedagogical and legal aspects (Gamst & Langballe, 2004; Øvreeide, 2009; Vis, 2004). From a holistic perspective, there is a connection between assessments of individual students' needs and improving the school as a whole through professional development and system change (Anthon, 2002; Hustad et al., 2013, 2016; Midtlyng, 2009; Tveit, 2012). In fact, research has

reported that teachers want more collaboration and help in the classroom from the supporting stakeholders (Mælan et al., 2019) and that such direct help could increase teachers' ability to support students in the classroom, as well as reduce teachers' perceived stress related to the gap between their own competence and students' needs (Ekornes, 2015).

However, the reality seems to be that EPS and professionals in other extended services often work at a distance from teachers' social and pedagogical practices (Ahtola & Niemi, 2014; Fyiling & Handegård, 2009; Hustad et al., 2013). This distance could reduce shared knowledge of the life in the classroom and thus reduce the utility of the written plans (Mælan et al., 2019). Furthermore, distance hinders the development of knowledge of how to best adjust the learning possibilities for a particular student in a particular class with a particular teacher. According to previous studies, teachers and professionals from extended services are more likely to collaborate when they can develop a relationship based on respect and trust (Mælan et al., 2019; Mellin et al., 2017; Moran & Bodenhorn, 2015; Rothì et al., 2008). When successful, such relationships could be consistent with the concept of collaborative professionalism, characterized by a high degree of both precision and trust in professional relations (Hargreaves & O'Connor, 2018). According to research on professional learning cultures, such professional collaborations are more likely to occur if there are structures and common work tools and if the school leadership is involved (Harris, 2013; Stoll et al., 2006). According to practice epistemology, knowledge is mostly implicit and embedded in practice without a language to justify the reasons for actions. However, such tacit knowledge can become explicit through active reflection based on practice experiences (Dewey, 1929; Matthew & Sternberg, 2009; Schön, 1992). In a school's extensive work to implement an adjusted school offer to a student, the EPS could play the role of an external consultant who can render tacit knowledge explicit by leading a knowledge development process in an initial implementation phase (Meyers et al., 2012). An expert assessment process built on knowledge building by collaboration can be regarded as an implementation process in itself (Fixsen et al., 2005).

Research Question and Aim

Justified by the need for more knowledge regarding how the EPS works within a system-based approach to expert assessment work, a rationale was established in the introduction based on a holistic interpretation of the mandate. The idea of inclusion was linked to the bioecological and salutogenic development perspective. Professional collaboration between the EPS and the student, teacher, principal and other external services to develop knowledge was further deduced as a key element. The research question in this study is as follows:

- What experiences do EPS advisers, EPS leaders, principals and teachers have with a system-based approach to expert assessment work?

The findings are discussed in relation to the established rationale, and implications for the future realization of a system-based approach to expert assessment work are suggested. The exploratory focus of this study led to the selection of Q methodology as the research method to capture shared viewpoints among professionals. The Q study was created and conducted during the spring in 2018.

Materials and Methods

Q methodology was invented to reveal people's subjectivity by giving them the opportunity to convey their views through self-reference (Brown, 1980; Stephenson, 1953). Self-reference is the process by which participants evaluate each item (a Q statement) in relation to all other Q statements, and through Q sorting, they arrange cards according to their personal experiences, preferences, beliefs, or feelings (Stephenson, 1953; Stevenson & Valenta, 2009; Thorsen, 2009). Q analyses consist of correlation and factor analyses. In Q methodology, the exploration of views may contribute to creating

new hypotheses for future research rather than confirming or rejecting existing theory. Abduction consists of a search for a logical explanation for observed results (Thomas & Watson, 2002). Abductive strategies are useful to explore, describe and understand observations. Factor analyses can be used to discover new views, and principles of abduction may be used in the interpretation. Abduction is an important strategy in Q methodological research and refers to the process of generating theories (Blaikie, 2009; Haig, 2005, 2008).

Definition of Concourse

Q studies typically follow five distinct steps (van Exel & de Graaf, 2005), and a brief description of these steps will be provided. The first step is to define the concourse, which is the universe of communicability regarding the specific research topic (Brown, 1980). Various methods, such as interviews, focus groups, pictures, and conversations, can be used to grasp the concourse (Brown, 1991/1992; Øverland et al., 2012; Størksen et al., 2012). Informal conversations with professional actors in the field about the previously defined holistic way of interpreting the statutory task were first conducted to grasp the concourse of system-based assessment work. This was followed up by a theoretical pre-study (Kolnes, 2016) and a focus interview based on the pre-study. The pre-study gave direction for defining a system-based approach to expert assessment work as school development work in which the EPS leads the implementation of a knowledge development process in collaboration with the student, parents, teacher, principal and other relevant external services.

Developing the Q Sample

The second step in Q methodology is to develop the Q sample, which is a selection of representative statements from the concourse (van Exel & de Graaf, 2005). In the creation of a balanced Q sample, it is recommended to use statements representing various opinions (Brown, 1980). In this study, Fisher's balanced block design (3×3) was used as a tool to create a balanced sample of statements (Fisher, 1935; Stephenson, 1953). The Q sample was structured to avoid biases that may occur through possible over- and under sampling. The block design categories created were based on the theory of implementation factors (Fullan, 2007) and drivers (Blase et al., 2012), with the subsequent articulation of statements to be sorted by the respondents. A representative Q sample consisting of 54 statements was drawn from the concourse with the help of 9 different categories created to capture informants' experiences of a system-based assessment working process (Table 1).

Knowledge is here produced in an assessment process (horizontal A, B, C) through EPSs collaboration with the student, his parents, the teacher and the principal (vertical D, E, F). Six statements were also categorized into one additional 10th category (G) to capture informants' attitudes towards EPS's performance of the assessment work. The Q set created consists of 60 statements in total. Statements were printed on separate cards with arbitrary numbers.

Participants (P Set)

The third step involves selecting the P set, which refers to the group of participants (van Exel & de Graaf, 2005). Forty informants were recruited from Telemark County. One EPS adviser and one EPS leader from all ten EPS districts, which serves the county's 18 municipalities, were recruited. Ten

Table 1. Fisher balanced block design, $N = 60$.

		Beginning (A)	During (B)	End (C)	Mixed (G)
Student	(D)	6 statements (A/D)	6 statements (B/D)	6 statements (C/D)	6 statements
Teacher	(E)	6 statements (A/E)	6 statements (B/E)	6 statements (C/E)	
Principal	(F)	6 statements (A/F)	6 statements (B/F)	6 statements (C/F)	

principals and ten teachers were recruited from the same districts. The study was presented at a conference for EPS leaders and EPS advisers in the actual county. All EPS leaders and randomly chosen EPS advisers agreed to participate. Written invitation to participate was sent to random schools in each district to recruit principals and teachers who had special responsibility to coordinate follow-up of students with special needs. This first contact with principals and teachers was made via e-mail followed by telephone. Eight of ten principals agreed to participate. Two additional principals were therefore recruited at the end of the data collection process. The participants have very similar backgrounds as follows: on average, the participants are aged 50 years and have nine years of work experience; most participants hold a bachelor's degree with some further education. Most participants are women (over 80%), which most likely reflects the actual distribution of gender within these occupational categories in the Norwegian education system.

Q Sorting

The fourth step in a Q study involves letting participants Q sort statements (van Exel & de Graaf, 2005). A quasi-normal distribution grid was created to fit the 60 cards. The grid was divided into 13 categories (from +6 to -6). Four pilot Q sorts were performed with the four different segments of informants, who provided feedback on the written and oral instructions and the cards. During this process, some of the cards were adjusted to avoid duplicates and unclear or unintended content. Q sorting was mainly performed in the informants' workplaces (schools and EPS offices). Additionally, information on age, education and work experience was collected. The participants were informed that there were no right or wrong ways to sort the cards and that the researchers were only interested in the participant's personal (subjective) experiences. The participants were given practical advice regarding how to conduct the Q sorts, and the following condition was provided:

You have the role of a teacher, EPS adviser, principal or EPS leader. What experiences do you have with the way the EPS works in the expert assessment process? Sort the cards according to what is most like or most unlike your experiences in connection with this work. Use your own experiences as a starting point.

The participants were instructed to sort the cards individually according to their personal experiences. The informant was further instructed to justify the placement of statements on the extremes (+6 and -6) in writing.

Q Factor Analysis and Interpretation

The fifth step in Q methodology is to analyse and interpret the results (van Exel & de Graaf, 2005). All 40 Q sorts were plotted and analysed using the PQMethod program (Schmolck & Atkinson, 2002). When conducting a Principal Component Analysis and Varimax rotation, a two-factor solution seemed to give the clearest results after attempting several factor solutions (Table A1 in Appendix). In Q studies, the goal is to reduce the complexity of the data to present factors that reflect the reality of the participants. In light of this, two factors that were meaningful to interpret were extracted. The two factors combined explained 42% of the variance, and the correlation between factors 1 and 2 was 0.31. The factor solution then indicates two main views with distinct differences. All Q sorts with a loading that was significant at $p < .01$ on a factor were classified as defining Q sorts (see those marked with an X in Table A1 in Appendix). Six Q sorts were confounding and therefore de-flagged. Factor scores are weighted averages from the Q sorts of each person who defines the factor and are merged to create factor arrays, and then the factor arrays are reverted back to the original values used in the first Q sorting to create a model Q sort. The Q analyses form an ideal-typical Q sort for each factor (Figures 1 and 2), which becomes the basis for interpretation.

Most unlike						Most like						
-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6
41	25	23	40	45	39	2	49	31	15	54	47	4
36	57	14	21	50	53	35	1	55	34	8	18	60
	11	26	38	27	19	22	28	5	3	33	51	
		13	12	56	20	29	16	52	44	17		
			7	48	37	42	46	24	6			
				32	10	59	43	9				
						58						
						30						

Figure 1. Ideal-typical Q sort, factor 1.

Most unlike						Most like						
-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6
10	53	13	46	14	54	33	22	32	38	8	50	60
56	21	1	15	19	42	25	5	44	43	16	6	58
	20	39	11	57	9	12	24	48	18	3	52	
		59	55	17	2	7	45	47	51	37		
			29	49	40	36	31	34	27			
				30	23	26	28	4				
						41						
						35						

Figure 2. Ideal-typical Q sort, factor 2.

The ideal-typical Q sorts consist of weighted averages of card placements for all participants loading highly on this factor. In this process, higher-loading exemplars have more weight in the average process because they are the best examples of the factor (Brown, 1980; Stenner et al., 2003). Characteristic statements related to the factor, distinguishing statements and the consensus statements were analysed and interpreted. In addition, the informants' reasons for extremes (+6 and -6) and background information are added to the interpretation of the factors. The statements were originally in Norwegian.

The study was registered at The Norwegian Social Science Data Services (NSD). The participants were informed about anonymity in writing and verbally about the purpose of the study and the study design. They were also informed of the option to withdraw. Informed consent sheets were signed.

Results

What experiences do EPS advisers, EPS leaders, principals and teachers have with a system-based approach to expert assessment work? The following two distinct viewpoints were identified with the help of principal component factor analyses: (1) the teacher-focused EPS adviser and (2) the principal-focused EPS adviser. All four types of informants were represented in both viewpoints (Table A1 in Appendix). First, a brief summary of each viewpoint will be presented, consisting of defining statements. The viewpoints, which are shown in Table A2 in Appendix, are further illustrated by some examples of why the participants placed the statements on the extreme ends (+/−6) of the grid selected from participants whose loadings are the most representative of the factor. Finally, the main differences and similarities between the two viewpoints will be explained.

The Teacher-focused EPS Adviser (Viewpoint 1)

This viewpoint (viewpoint 1, Table A2 in Appendix) represents the experiences of 18 participants who significantly loaded on this factor as follows: six EPS leaders, five EPS advisers, four principals and three teachers. The statements on the positive side of the grid (Figure 1, +6 to +4) express what the participants with this viewpoint experience the most as follows: these participants experience that the EPS adviser speaks with the parents regarding how they experience the student's life in the school situation (st.4,+6):

The EPS advisers' collaboration with parents is important and fundamental in the assessment work to grasp the parents' understanding of the student and the challenges in school ... it contributes to the experience of collaboration with school. (participant 4, Table A1 in Appendix)

Participants holding this viewpoint also experienced that the EPS adviser always talked with the teacher to determine what he or she was concerned about at an early stage in the assessment process (st.60,+6). These participants also experienced that the EPS adviser spoke with the teacher regarding how experiences from the assessment process could be used to understand the student's special needs and identify factors in the student's learning environment that affect the learning situation (st.47,+5). These participants emphasized that the EPS adviser guided the student/parents (st.18,+5) and the teacher (st.51,+5) in a supportive, encouraging, respectful and equal manner. They further experienced that the EPS adviser, at the outset of the assessment process, assisted the teacher in assessing what benefits the student had derived from ordinary education (st.54,+4) and that the EPS adviser talked with the student to determine how he or she was coping with the school day (st.8,+4). These participants also experienced that the EPS adviser talked with the teacher about how results from the EPS's mapping of learning abilities could be used to ensure realistic educational objectives for the student (st.33,+4). They also addressed the student to determine how he or she was coping with the school day at the outset of the assessment process (st.17,+4).

The statements on the negative side of the grid (Figure 1, −6 to −4) expressed what the participants experienced the least. These participants did not experience EPS advisers' clarifying conditions for implementing guidance and training programs (time, room, various group compositions, rearrangement of teaching resources, etc.) with the principal (st.41,−6):

We (EPS advisers) have too little dialogue with principals related to physical and organizational conditions for the implementation of supervision and training programs. (participant 38, Table A1 in Appendix)

These participants did not experience that at an early stage, the EPS adviser spoke with the principal regarding how the principal could support the class teacher's plan to help the student better cope with the school day (st.36,−6). Furthermore, these participants did not experience that at an early stage, the EPS adviser spoke with the principal regarding which teachers should be involved in adaptation efforts (st.11,−5) or how the principal could support the student's/parents' plan for what the student and his parents could do to help the student better cope with the school day (st.57,−5). These

participants did not experience that the EPS adviser spoke with the principal regarding how a referral to external auxiliary resources could contribute to enhancing the school's capacity for managing students with special needs in the long term (st.25,-5). Nor did they experience that the EPS adviser talked with the principal about how the implementation of the EPS adviser's direct guidance for the student could be organized (st.13,-4) or about what was needed for staff to loyally implement the adaptation efforts (st.23,-4). These participants did not experience the EPS adviser's assistance to the principal, which took into consideration the results of work with the student to better cope with the school day (st.14,-4), nor did they believe that special education entails working specifically with learning difficulties (st.26, -4).

The Principal-focused EPS Adviser (Viewpoint 2)

This viewpoint (viewpoint 2, [Table A2](#) in Appendix) represented the experiences of 16 participants who significantly loaded on this factor as follows: three EPS leaders, three EPS advisers, five principals and five teachers. The statements on the positive side of the grid ([Figure 2](#), +6 to +4) expressed what the participants in this viewpoint experienced the most as follows: these participants experienced that at an early stage, the EPS adviser always spoke with the teacher to determine the teacher's concerns (st.60,+6):

The assessment work always starts with a discussion meeting at the school with the teacher who has a concern and who 'owns the problem' with the principal, the school's special education coordinator as well as other relevant staff from the school. The case is not in progress until the teacher's concerns about the student are expressed. (participant 31, [Table A1](#) in Appendix)

These participants experienced that the EPS adviser always spoke with the principal regarding the individual support needs that were tested before reporting to the EPS (st.58,+6). These participants also experienced that at the outset, the EPS adviser always spoke with the principal regarding any changes in the students' learning environment attempted before the referral to the EPS (st.50,+5). These participants further experienced that the EPS advisers' evaluation was always considered in connection with any previous evaluations of other external support stakeholders (st.6,+5). Accordingly, these participants also experienced that at an early stage, the EPS adviser examined whether external support services had been involved, what assessments had been performed and whether such services should be involved in the expert assessment process (st.52, +5). The participants further experienced that the EPS adviser talked with the teacher about how results from EPS's mapping of learning abilities could be used to ensure realistic educational objectives for the student (st.8,+4). They further experienced that the EPS adviser talked with the principal about how the special needs measures tested in the student's learning environment could be continued as part of the student's educational facilities (st.37,+4) and emphasized that they guided the principal in a supportive, encouraging, respectful and equal manner (st.16,+4). The participants further experienced that EPS's assistance to the school in the assessment process was useful (st.3,+4).

The statements on the negative side of the grid ([Figure 2](#), -6 to -4) expressed what the participants experienced the least as follows: these participants did not experience that the EPS adviser provided specific exercises for the student to practice along with other students to better cope with the school situation (st.56,-6):

My experience is that EPS does not give the students specific tasks. EPS provides basic tips on goals and measures that teachers and special teachers can work on and develop. EPS has little contact with the student, only observation before assessment report is written. (participant 30, [Table A1](#) in Appendix)

These participants did not experience that the EPS adviser provided the student practice exercises adapted to what the student could manage (st.10,-6). These participants did not experience that the EPS adviser observed the student and provided support and direct feedback in combination with providing specific practice exercises (st.20,-5). Furthermore, the participants did not experience that the EPS adviser guided the student in cooperation with parents, teachers, and other

external support services (when involved) and that such involvement was required (st.21,—5). These participants also did not experience that at an early stage, the student or his parents received assistance from the EPS adviser to develop a realistic plan for what they could do to facilitate better coping with the school day (st.53,—5). These participants did not experience that the EPS adviser provided specific exercises that the teacher could practice in the classroom (st.1,—4) or practice exercises that were adapted to what the student could manage (st.59,—4). Finally, they did not experience that the EPS adviser talked with the principal about how the EPS adviser's direct guidance to the student could be organized (st.13,—4) or that the EPS adviser reassured the student when he or she felt overwhelmed by new information or when practising new working methods (st.39,—4).

Distinguishing Statements

A distinguishing statement is discovered statistically and represents distinct differences between views (Brown, 1980; van Exel & de Graaf, 2005). A total of 52 statements distinguished “the teacher-focused EPS adviser” from “the principal-focused EPS adviser”. In general, these statements confirmed the previous results. Of the 10 statements that most distinguished the two viewpoints from each other, five were about EPS's collaboration with the principal, three about EPS's collaboration with the teacher and two about EPS's collaboration with the student and his or her parents. The viewpoints in the participants' ratings of statement 50, which concerned attempted changes in the learning environment, differed. The principal-focused participants gave a high rating to the statement that EPS advisers inquired with the principal about what changes had been made in the student's learning environment prior to the referral to EPS; this response was contrasted by the teacher-focused participants' negative rating of the statement (st.50,+5,—2). There was also a significant difference in how participants rated statement 58. The principal-focused participants gave high ratings to the EPS advisers' inquiries with the principal about which individual support needs (for the student) had been tested before reporting to the EPS; this response was contrasted by the teacher-focused participants' neutral rating of this statement (st.58,+6,0). The same pattern of differences related to EPS advisers' collaboration with principals in the beginning and end of the expert assessment process occurred in st.38 (—3,+3), st.37 (—1,+4) and st.36 (—6,0).

The EPS advisers' assistance to teachers in making a realistic plans to help the student cope better with the school day was rated significantly higher by the teacher-focused participants than the principal-focused participants (st.55,+2,—3). The same pattern was found for the EPS advisers' assistance to the teacher in assessing what benefits the student had obtained from ordinary education (st.54,+4,—1). The teacher-focused participants' ratings of EPS's observation, support and feedback to the teacher, in combination with providing specific practice exercises, were rated positively, which was contrasted by the principal-focused participants' negative rating of the same statement (st.15,+3,—3).

In the teacher-focused viewpoint, participants experienced that the EPS advisers always initiated the assessment process by addressing the student to determine how he or she was coping with the school day. This was contrasted by the principal-focused viewpoint, which did not rate this statement very high (st.17,+4,—2). EPS advisers' collaboration with parents at an early stage of the assessment, focused on how they experienced the student in the school situation, was rated high in the teacher-focused viewpoint but relatively low in the principal-focused viewpoint (st.4,+6,+2).

Consensus Statements

A consensus statement is a statement that does not distinguish between factors (Brown, 1980; van Exel & de Graaf, 2005). Consensus was discovered statistically and represented a high degree of similarity in views. A total of 12 statements were consensus statements (see Table A2 in Appendix, underlined values). Participants defining both views had strong positive experiences about one statement: “The EPS adviser talks with the teacher about how results from the EPS's mapping of learning abilities can be used to ensure realistic educational objectives for the student (st.8,+4,+4)”.

Participants defining both views also had positive experiences with the following statement: “I experience that EPS’s assistance to the school in the assessment process is useful (st.3,+3,+4). Most of the consensus statements (9) were placed in a neutral position (−3 to +3)”. Two were about attitudes toward EPS’s role in the assessment work: “I believe that the EPS adviser, as an expert, plays an important ‘organization consultant role’ in the school (st.24,+2,+1)” and “I believe that the EPS adviser, as an expert, plays an important ‘knowledge developer role’ in the school (st.44,+3,+2)”. Both views had a relatively strong negative experience about one statement: “The EPS adviser talks with the principal about how the implementation of the EPS adviser’s direct guidance of the student could be organized (st.13,−4,−4)”.

Discussion

The experiences of EPS advisers, EPS leaders, principals and teachers with a system-based approach to expert assessment work were explored. As reported in the results, the Q factor analyses revealed the following two different shared viewpoints: teacher-focused and principal-focused EPS advisers. The findings are discussed in relation to the rationale established in the introduction. Implications for the realization of a system-based approach to expert assessment work are further suggested.

Collaboration

According to the results, EPS advisers appear to collaborate least with the students during the assessment process. In the principal-focused EPS viewpoint, all statements regarding the EPS’s guidance of students based on specific experiences in the school situation were mainly placed on the negative side of the grid. This lack of collaboration with the student also seems to be evident in the teacher-focused EPS viewpoint but to a lesser extent. According to previous studies, children can provide important information on their own situations if they are given good opportunities to express themselves in free narratives without being led (Gamst & Langballe, 2004; Øvreeide, 2009; Vis, 2004). However, students’ language and capacity constraints can make this difficult, necessitating concrete and practical approaches built on principles from augmentative and alternative communication (e.g., Murphy & Cameron, 2008). Such approaches can reveal well-known factors that affect learning, such as relation to the teacher, other students and ways of teaching (Hattie, 2009), the last of which involves professional and direct cooperation with the child.

The results showed that collaboration with the teacher was the least reflected in the principal-focused viewpoint as statements regarding the EPS’s guidance of teachers based on specific experiences in the practice field were mainly located on the negative side of the grid. However, this finding also seems evident in the teacher-focused viewpoint but to a lesser extent. A tighter collaboration between the EPS adviser and the teacher regarding the actual work in the classroom could increase the EPS adviser’s knowledge of the school and classroom settings, potentially reducing the gap between the teacher’s social and educational practices and the EPS’s efforts (Ahtola & Niemi, 2014; Fylling & Handegård, 2009; Hustad et al., 2013), thus allowing the EPS adviser to provide more relevant advice. Furthermore, such collaboration could address the teachers’ need for more support in their classrooms (Ekornes, 2015; Mælan et al., 2019). However, inter-professional collaboration can be challenging. To resolve this issue, the roles should be clarified to promote respect and trust among the collaborators (Mælan et al., 2019).

According to the results, collaboration with the principal seemed to be scarce in both viewpoints. In the teacher-focused viewpoint, all statements related to the EPS’s collaboration with the principal were placed on the negative side of the grid, suggesting no or limited collaboration. A pattern that shows the principal’s involvement in the assessment process could have been expected among the principal-focused EPS advisers. However, this does not seem to be the case. Moreover, the principal-focused EPS advisers’ collaboration with principals seems to be more about bringing clarity to what has been done in a particular case at the beginning of the assessment process rather than

using the principal as an active support when working with students, parents and teachers during the assessment process. This general lack of principal involvement can be problematic because the principal usually has the power to decide where educational and financial resources should be spent. Such a lack of communication could cost students resources and help. Another challenge concerns the school focus. If the students' needs require a change in the teachers' working routines or their thinking regarding how to facilitate inclusive education, this might require a development process in the school initiated by school leadership (Harris et al., 2013; Stoll, 2009; Stoll et al., 2006). Furthermore, the principal is the only person who can invite external experts for professional learning to stimulate the internal change process (Fullan, 1992; Hall & Hord, 2015). Thus, collaboration between EPS and the principal could enhance the school's capacity to provide an inclusive learning environment for all students.

The Expert Assessment Process

While teacher-focused EPS advisers collaborate mainly with the teacher to create clarity in the situation and reveal the needs of the teacher and student, principal-focused EPS advisers approach the principal to obtain this information. Another contrast is that while teacher-focused EPS advisers approach students and parents at the beginning of the assessment process, principal-focused advisers approach assessments performed by other external services. However, both viewpoints show that collaboration with the school primarily occurs at the beginning of the expert assessment process, when an overview is needed, and at the end, when a conclusion with advice for further arrangements is presented. There is limited or no contact with the school during the actual process when collaborative knowledge development is supposed to occur. This finding could provide support for the traditional role of the EPS adviser, which was to map learning conditions to assess students' special needs (Tveitnes, 2018). Based on this finding and the respondents' relatively neutral positioning of statements regarding the EPS adviser's role as a knowledge developer and organizational consultant in both viewpoints, it seems fair to suggest that an important part of a system-based approach to expert assessment work is lacking. These findings are consistent with previous research concerning time use in the Norwegian EPS, which showed that 80% of the time was spent on expert assessments, while the writing component of the expert assessment process accounted for 50% of the time spent (Nordahl, 2018). This finding indicates that the expert assessment process is mainly understood as a writing process rather than as a process where knowledge is developed in collaboration with the student, parents, teacher and principal.

EPS advisers who mainly address the principal thus appear to be more distant from the field of practice than EPS advisers who mainly address the teacher. However, despite two different approaches to the expert assessment work, either through a teacher or the principal, a common challenge related to developing expert knowledge by collaboration with the student, teacher and principal is revealed. The students' experience with school life is the least emphasized in both viewpoints.

Implications

The results of the present study highlight the need to strengthen the understanding of collaboration as a key element for future realization of a system-based approach to the expert assessment work process. This main challenge is further illustrated by showing connections between three different conditions when developing expert knowledge by collaboration (Figure 3):

(1) To grasp the student's experience of the school situation; (2) to use this knowledge as a basis for developing classroom practice with the student (parents), teacher, principal and other external services if involved; and (3) securing the principal's support for such a joint knowledge development process. Curved arrows show how auxiliary effort on the 2nd layer is conditioned by auxiliary effort on both the 1st and 3rd layer.

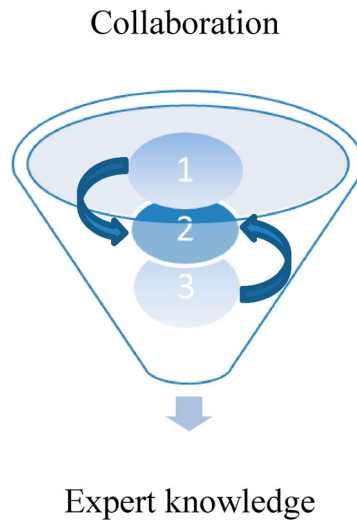


Figure 3. Developing of expert knowledge by collaboration.

The first condition relates to the salutogenic models (Antonovsky, 1979, 1987) highlighting of the actor perspective in the bioecological development model (Bronfenbrenner, 2005; Bronfenbrenner & Morris, 1998) by focusing on coping, predictability, co-determination and student participation in the design of auxiliary interventions. The second condition relates to the understanding of a practical epistemological perspective (Dewey, 1929; Matthew & Sternberg, 2009; Schön, 1992) in which expert knowledge about adaptations in the students learning environment is developed in collaboration with the student (parents), teacher, principal and other external services if involved. The third condition is related to the understanding of principal's support (Harris et al., 2013; Stoll, 2009; Stoll et al., 2006) as crucial for realizing such a joint knowledge development process in school. Curved arrows showing how auxiliary efforts on the 2nd layer is conditioned by auxiliary effort on both the 1st and 3rd layer, refers to the understanding of the relational perspective on support and support needs (Haug, 2017; Mitchell, 2014) as expressed in the bioecological the development perspective (Bronfenbrenner, 2005; Bronfenbrenner & Morris, 1998). Students' needs are here inextricably linked to the school's capacity to address these needs, implying an increased focus on EPS helping school leaderships recognize the link between individual students' needs and the school's need for capacity building to support a joint knowledge developmental process. Within this framework of understanding, the expert assessment of students' special needs and system changes must be considered as one integrated work task, requiring a holistic interpretation of the mandate (Opplæringslova [The Education Act], 1998, § 5.6).

Researchers have suggested that rather than policy influencing practice, it is more likely that practitioners shape policy (Coburn, 2001; Cuban, 1984). Thus, practitioners interpret, adapt, and even transform reforms as they implement such reforms (Coburn, 2001). In addition to the importance of practical training of how to work (Meyers et al., 2012), as illustrated above (Figure 3), a change in practice requires a united understanding of the underlying core ideas (Coburn, 2001; Spillane et al., 2006) as expressed in the rationale.

First, this change of understanding concerns the EPS who offers help to schools. However, due to the need for collaboration, a change in expectation also needs to occur among teachers and principals. The last step of a Q study involves not only interpretation, but also a deeper understanding of the results that have emerged (Stephenson, 1953). According to this, further in-depth studies focusing on realizing of a system-based approach to expert assessment work, as illustrated in Figure 3, are needed.

Limitations and Strengths

Q methodology is designed to explore subjective views, to seek explanations and/or to develop theory (Brown, 1980). The present study had the same goals. Q methodology is not designed to generalize results to larger populations, to estimate prevalence or to determine casual relationships between variables (Stephenson, 1953), but when Q methodological principles are followed, the results are likely to be found in larger studies (Brown, 1980). The researchers put their own subjectivity into the selection of statements. However, the use of Fisher's balanced block design (Fisher, 1935) still ensures that a wide range of themes from the concourse are represented in the Q sample and after the Q sorting the factor analyses determines the results and guides the analyses. The factors are derived from statistical analysis, which preserves objectivity. This approach contrasts with conventional qualitative studies, where there may be a higher risk of researchers' own subjectivity influencing data interpretation and categorization (Øverland, 2013).

According to the Q sample, this study has been limited to a focus on professional collaboration between EPS and the student, teacher and principal. However, this focus does not underestimate the importance of collaboration with parents and other external services, if involved, to understand the student's needs in the school situation. Further, the main aim was to explore the participant's experiences with the assessment process, by the help of Q methodology, to detect shared viewpoints. Therefore, and because the distribution of the different respondent groups on the two factors was relatively even, this study does not investigate each profession and their experiences in separate groups. Findings from this study can be relevant when it comes to discovering areas for future research on how to realize a systems-based approach to expert assessment work.

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Appendix

Table A1. Factor loading table with an X indicating hand-flagged Q Sort.

Staff code	Factor 1	Factor 2
1 EPSL	0.5813X	0.3069
2 EPSL	0.6045X	0.2873
3 EPSL	0.3349	0.5786X
4 EPSL	0.7712X	-0.0435
5 EPSL	0.7071X	0.0872
6 EPSL	0.4532	0.5779X
7 EPSL	0.5917X	0.4356
8 EPSL	0.2701	0.5226X
9 P	0.2158	0.6003X
10 T	0.3883	0.3857
11 EPSA	0.5642X	0.3742
12 P	0.4155X	0.2946
13 T	0.1548	0.5022X
14 P	0.4024	0.3522
15 T	0.0969	0.4543X
16 T	0.2125	0.5104X
17 P	0.4909X	0.3507
18 EPSA	0.5190X	0.1176
19 EPSL	0.8347X	-0.1420
20 P	0.6855X	-0.0798
21 T	0.5618X	0.2313
22 EPSA	-0.0937	0.5596X
23 EPSA	0.3182	0.6491X
24 EPSA	0.6171X	0.2385
25 T	0.3057	0.5498X
26 P	0.0778	0.5594X
27 EPSA	0.4900X	0.3685
28 EPSL	0.4134	0.4983
29 T	0.1719	0.7521X
30 P	-0.1340	0.8742X
31 EPSA	-0.0554	0.6812X
32 EPSA	0.3923	0.4482
33 EPSA	0.4404	0.5010
34 P	0.5783X	0.0752
35 T	0.5448X	0.1431
36 P	-0.0909	0.6819X
37 T	0.4298	0.4552
38 EPSA	0.7690X	-0.0482
39 T	0.6401X	0.2700
40 P	0.1813	0.3607X

EPSL: Educational Psychological Service Leader; P: Principal; EPSA: Educational Psychological Service Adviser; T: Teacher.

Table A2. Factor score table, 60 statements.

NO	STATEMENTS	VIEWPOINT	VIEWPOINT
		1	2
1	The EPS provides specific exercises the teacher can practice in the classroom (B/E)	1**	-4
2	The EPS advisor reassures the teacher when he or she feels overwhelmed by e.g., new information or when practicing new working methods (B/E)	0*	-1
3	I experience that the EPS's assistance to the school in the expert assessment process is useful (G)	3	4
4	At an early stage, the EPS advisor speaks with guardians about how they experience the student in the school situation (A/D)	6**	2
5	Based on the experiences that are made, the EPS advisor speaks with guardians about possible needs for support at home via Child Welfare Services, based on the special challenges that arise when caring for children with special needs (C/D)	2**	1
6	The EPS advisor's evaluation is always considered in connection with any previous evaluations from the Children and Adolescents' Psychiatric Polyclinic Services (BUP), Habilitation Services, the Support System for Special Needs Education (Statped) and the like (A/F)	3**	5

(Continued)

Table A2. Continued.

NO	STATEMENTS	VIEWPOINT	VIEWPOINT
		1	2
7	I believe that expert assessment work prevents the EPS from contributing in competency and organizational development in the school (G)	-3**	0
8	The EPS advisor speaks with the teacher about how results from the EPS's mapping of learning abilities can be used to ensure realistic educational objectives for the student (C/E)	<u>4</u>	<u>4</u>
9	The EPS advisor assists the teacher in considering the results of the work with (plan for) the student to better cope with the school working day (C/E)	2**	-1
10	The EPS advisor provides the student with practice exercises that are adapted to what the student can manage (B/D)	-1**	-6
11	At an early stage, the EPS advisor speaks with the principal about which teachers should be involved in the adaptation efforts (A/F)	-5**	-3
12	The EPS advisor speaks with the principal about how the individual teachers' experiences from adaptation efforts in the expert assessment process can be used systematically to raise more teachers' competence regarding adapted education for more students in the long term (C/F)	-3**	0
13	The EPS advisor speaks with the principal about how the implementation of the EPS advisor's direct guidance to the student can be organized (B/F)	<u>-4</u>	<u>-4</u>
14	The EPS advisor assists the principal with considering the results of the work with (plan for) the student to better cope with the school working day (C/F)	-4**	-2
15	The EPS advisor observes, gives support and feedback to the teacher in combination with providing specific practice exercises (B/E)	3**	-3
16	The EPS advisor guides the principal in a supportive, encouraging, respectful and equal manner (B/F)	1**	4
17	At the outset, the EPS advisors always speaks with the student to find out how he or she is coping with the school working day (A/D)	4**	-2
18	The EPS advisor guides the student/guardians in a supportive, encouraging, respectful and equal manner (B/D)	5**	3
19	The EPS advisor speaks with the principal about how implementation of the EPS advisor's guidance to the teacher can be organized (B/F)	<u>-1</u>	<u>-2</u>
20	It is common that the EPS advisor observes, provides support and direct feedback to the student, in combination with providing specific practice exercises (B/D)	-1**	-5
21	The EPS advisor guides the student in cooperation with guardians, teacher and possibly external support services, if these are involved and this is necessary (B/D)	-3**	-5
22	The EPS advisor meets with the student/guardians and possibly external support services together with the teacher to clarify what tested individual/personal support measures should be continued in a plan for the student's continued educational facilities (C/D)	<u>0*</u>	<u>1</u>
23	The EPS advisor speaks with the principal about what is needed in order for staff to loyally implement the adaptation efforts with the principal (B/F)	-4**	-1
24	I believe that the EPS advisor, as an expert, provides an important "organization consultant role" in the school (G)	<u>2*</u>	<u>1</u>
25	The EPS advisor speaks with the principal about how referral to Statped regarding system-based services or referral to one of the country's national centers for development of education quality can contribute to enhancing the school's capacity for managing students with special needs in the long term (C/F)	-5**	0
26	I believe that special education means to work specifically with learning difficulties (G)	-4**	0
27	The EPS advisor speaks with the principal about what support the student requires in the implementation of the adaptation efforts (B/F)	-2**	3
28	The EPS advisor guides the class teacher in cooperation with the principal and possibly external support services if these are involved and this is necessary (B/E)	<u>1</u>	<u>1</u>
29	At an early stage, the EPS advisor meets with the student/guardians together with the teacher to discuss what plan the student/guardians have in order for the student to better cope with the school working day (A/D)	0**	-3
30	At an early stage, EPS advisor inquires with the teacher about how guardians who are experienced as difficult can be understood and managed (A/E)	<u>0*</u>	<u>-2</u>
31	The EPS advisor speaks with the student/guardians about how results from mapping of learning abilities can be used to concretize what learning objectives the student should have (C/D)	2**	1
32	The EPS advisor meets with the teacher/guardians and possibly external support services together with the principal to clarify which tested special needs measures should be continued as part of the student's educational facilities (C/D)	-2**	2
33	The EPS advisor speaks with the teacher about how experiences from the expert assessment process can be used in the specific organization of the educational facilities (C/E)	4**	0

(Continued)

Table A2. Continued.

NO	STATEMENTS	VIEWPOINT	VIEWPOINT
		1	2
34	At the outset, the EPS advisor actively uses existing knowledge (from the school, the EPS and possibly external support services) to discuss how the student can be managed in the school situation so that he or she experiences coping (A/E)	3**	2
35	The EPS advisor speaks with the teacher and any involved external support services about how the tested special needs measures appear to have influenced the student's experience of coping with the school working day (C/E)	<u>0</u>	<u>0</u>
36	At the outset, the EPS advisor speaks with the principal about how the principal can support the class teacher's plan for the student to better cope with the school working day (A/F)	-6**	0
37	The EPS advisor speaks with the principal about how the tested special needs measures in the student's learning environment can be continued as part of the student's educational facilities (C/F)	-1**	4
38	The EPS advisor speaks with the principal about how tested individual/personal support measures for the student can be continued as part of the student's educational facilities (C/F)	-3**	3
39	The EPS advisor reassures the student when he or she feels overwhelmed by e.g., new information or when practicing new working methods (B/D)	-1**	-4
40	At an early stage, EPS advisor meets with the teacher, student (guardians) together with the principal, to discuss what plan the teacher has in order for the student to experience coping better with the school working day (A/E)	-3**	-1
41	At an early stage, the EPS advisor clarifies the conditions for implementing guidance and training program (time, room, various group compositions, rearrangement of teaching resources etc.) (A/F)	-6**	0
42	Based on the experiences that are made, the EPS advisor speaks with the student/guardians about the need for referral to external support services such as BUP, Habilitation Services, Statped and the like (A/F)	<u>0</u>	<u>-2</u>
43	I believe that special needs education means to work with the basic and general strategies in education and teaching (G)	1**	3
44	I believe that the EPS advisor, as an expert, provides an important "knowledge-developer role" in the school (G)	<u>3</u>	<u>2</u>
45	The EPS advisor assists the principals with using the experiences from the adaptation efforts in the expert process, to assess the student's benefit from the ordinary educational facilities (C/F)	-2**	1
46	The EPS advisor assists the student/guardians in considering the results of the attempt to (plan to) better cope with the school working day (C/D)	1**	-3
47	The EPS advisor speaks with the teacher about how experiences from the expert assessment process can be used to understand the student's special needs and factors in the student's learning environment that affect the education (C/E)	5**	2
48	The EPS advisor speaks with the principal about what support the teacher requires in the implementation of the adaptation efforts (B/F)	-2**	2
49	The EPS advisor speaks with the student/guardians and any external support services involved about how tested individual/personal support measures have influenced the students experience of coping in the education situation (C/D)	1**	-2
50	At the outset, the EPS advisor always inquires with the principal about what attempts at changes in the students learning environment (system factors) have been made before referral to the EPS (A/F)	-2**	5
51	The EPS advisor guides the teacher in a supportive, encouraging, respectful and equal manner (B/E)	5**	3
52	Already at an early stage, the EPS advisor examines whether external support services have been involved, what assessments they have made and whether they should/can be involved in the expert assessment process (A/F)	2**	5
53	At an early stage, the student/guardians receive assistance from the EPS advisor to make a realistic plan for what the student/guardians can do in order for the student to better cope with the school working day (A/D)	-1**	-5
54	At the outset, EPS advisor assists the teacher in assessing what benefits the student has from the ordinary education (A/E)	4**	-1
55	At an early stage, the teacher receives assistance from EPS advisor to make a realistic plan for what can be done in order for the student to experience coping better with the school working day (A/E)	2**	-3
56	The EPS advisor provides specific exercises the student can practice together with other students to better cope with the school situation (B/D)	-2**	-6
57	At an early stage, the EPS advisor speaks with the principal about how the principal can support the students/guardians' plan for what they themselves can do in order for the student to better cope with the school working day (A/F)	-5**	-2

(Continued)

Table A2. Continued.

NO	STATEMENTS	VIEWPOINT	VIEWPOINT
		1	2
58	At the outset, the EPS advisor always inquires with the principal about what individual support needs (for the student) that have been tested before reporting to the EPS (A/F)	0**	6
59	The EPS advisor provides the teacher with practice exercises that are adapted to what he or she can manage (B/E)	0**	-4
60	At an early stage, the EPS advisor always speaks with the teacher to find out what he or she is concerned about (A/E)	6**	6

Note: * represents distinguishing statements at significance level $P < .05$. ** represents distinguished statements at significance level $P < .01$.