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The Perceived Value of Interprofessional Practice According to Classroom Teachers, Special Education Teachers, and Speech-Language Pathologists

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ABSTRACT

Purpose: When working with students with speech, language, and communication needs, classroom teachers (CLTs), special education teachers (SETs), and speech-language pathologists (SLPs) must engage in interprofessional practice (IPP). According to the expectancy-value model, IPP adoption is partially contingent on its perceived value. The objective of this study was to analyze whether and how the perceived value of IPP differs across four domains (interest, costs, benefits for the specialist, and benefits for the students) among the three professional groups and the extent to which various factors affect this perception. This study focuses on school-based professionals in the Canton of Bern, Switzerland, working under the same administrative authority and in accordance with the same guidelines.
Method: A total of 317 staff members from mainstream schools in Bern, Switzerland (142 CLTs, 89 SETs, and 86 SLPs), completed an IPP questionnaire. Confirmatory factor analysis was used to compare the four domains of perceived values between groups, and structural equation modeling was used to assess the impact of various factors.
Results: SETs showed the most positive perception of IPP across all domains, whereas CLTs and SLPs were less positive. Self-reported competencies in IPP positively influenced the perceived value of CLTs and SLPs; however, perceptions were more negative at the secondary school level for CLTs and SLPs.
Conclusion: Since CLTs, SETs, and SLPs in the Canton of Bern, Switzerland, operate under the same administrative guidelines, the differences in perceived value of IPP are attributed to their distinct professional backgrounds and work environments.
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On May 15, 2014, Switzerland ratified the UN Convention on the Rights of Persons with Disabilities, thereby committing to providing inclusive education for children with various disabilities. This includes children with speech, language, and communication needs (SLCN, a collective term "that covers the whole range of problems affecting speech, language and communication, regardless of the type of problem or putative aetiology"; Bishop et al., 2017, p. 1074). These children face significant challenges in mainstream educational settings because they lack the language skills necessary to meet the demands of the educational system (Archibald, 2017). However, teaching children with SLCN requires a range of special skills to address language difficulties and associated symptoms; one must identify and reduce linguistic and communicative barriers, create linguistic and communicative conditions conducive to successful learning in an educational setting, optimize the teaching of technical and educational language, and combine language-based pedagogical principles with didactic methods (Bauer et al., 2022). Since no professional is able to cover this extensive range of skills by themselves, the successful inclusion of children with SLCN depends on the collaboration of professionals from diverse

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backgrounds (Archibald, 2017; Glück et al., 2013; Sallat & Siegmüller, 2016). When working with children with SLCN, classroom teachers (CLTs), special education teachers (SETs), and speech-language pathologists (SLPs) play a major role (Ehren, 2000). These three groups of professionals are distinguished not only by their main responsibilities when working with children with SLCN but also by their training, approaches, and work contexts, which may contribute to notable discrepancies in the way transprofessional collaboration is perceived and valued by these groups (Fabel-Lamla & Gräsel, 2020).

Interprofessional Practice in Schools

The American Speech-Language-Hearing Association (ASHA) defines this type of collaboration as interprofessional practice (IPP): "On successful IPP teams, each member provides their professional expertise and works together on an assessment and treatment plan that centers around the person and their family. Teams collaborate on planning and developing solutions, taking into account each member's perspective" (ASHA, n.d., para. 4). With regard to children with special needs—or, in the present case, children with SLCN—various professionals contribute their specific expertise to this collaborative effort.

As suggested by Ehren (2000), CLTs, SETs, and SLPs have different competencies in supporting children with SLCN that can be optimally utilized through a collaborative approach. CLTs offer language (sensitive) instructions, encompassing a range of pedagogical approaches that utilize language as a tool for cognitive processes and communication with the objective of integrating subject-specific and linguistic learning. A crucial aspect is the provision of targeted language assistance to pupils integrated into lessons (Woerfel & Giesau, 2018). SETs provide supplementary language facilitation, including the provision of linguistically rich and engaging input, to enable children to acquire both everyday and educational language. It is recommended that this should be a consistent feature of every lesson (Reber & Schönauer-Schneider, 2022). SLPs are responsible for speech-language therapy, with particular emphasis on specific therapeutic objectives associated with specific linguistic domains. This necessitates an individualized approach, whereby the therapeutic intervention is aligned with the specific therapeutic goal based on a comprehensive and detailed diagnostic assessment (Glück et al., 2013).

The combination of these disparate measures of language support can only be achieved through transdisciplinary collaboration or IPP, which can then create a synergy that leads to the achievement of goals and contributes to the well-being of the child (Hernandez, 2013). However, various studies have shown that CLTs and SETs rarely work together in close collaboration, preferring low-cost forms (exchange of information, materials, and ideas; Arndt & Werning, 2013; Gröhlich et al., 2015; Hernandez, 2013; Luder, 2021). The same is true for the collaboration between CLTs and SLPs (Archibald, 2017; Baxter et al., 2009; Beck & Dennis, 1997; Blechschmidt et al., 2013; Brimo & Huffman, 2023; Elksnin & Capilouto, 1994; Green et al., 2019; Hartas, 2004; Pershey & Rapking, 2003; Pfeiffer et al., 2019).

A multitude of factors have been identified as contributing to the success of IPP implementation (Huber & Ahlgrimm, 2012). Among these factors is the perceived value of IPP.

Perceived Value of IPP

According to the expectancy-value model proposed by Wigfield and Eccles (2000), an individual's inclination or motivation to engage in an activity is contingent on two key factors: the expectation of successfully executing the activity and the value placed on the anticipated outcome. In the context of IPP, these two aspects can be phrased as follows: "Am I able to successfully collaborate?" and "Is it worth engaging in such a collaboration?" In her survey on teacher collaboration with 583 CLTs in all-day schools, Drossel (2015) adapted the expectancy-value model to the context of teacher collaboration. She subdivided expectations into two categories: result oriented and process oriented. Similarly, she divided the values into four subcategories: interest, perceived costs, perceived benefits for the teacher, and perceived benefits for students. For each of these categories, Drossel used already existing and validated questionnaires as well as self-developed instruments. Her findings revealed that expectations regarding the success of collaboration do not predict the actual frequency or intensity of teacher collaboration. This may be attributed to the fact that successful collaboration is contingent not only on one's own actions but also on the actions of others. Consequently, collaboration outcomes are often beyond one's control. In contrast, the value component of the model was the most significant predictor of teacher collaboration, particularly in relation to the subcategories of interest and perceived benefits for the teacher.

In the context of IPP, it is reasonable to assume that the value of collaboration is perceived differently by CLTs, SETs, and SLPs given the disparate training programs they have undergone (Arndt & Werning, 2013; Fabel-Lamla & Gräsel, 2020; Fischer et al., 2017). Hernandez (2013) refers to the existence of disparate "philosophies" or "wavelengths" among professional groups. For example, CLTs have gained a reputation for rejecting IPP because they feel that they must achieve their goals independently (Gräsel et al., 2006). This behavior has frequently been attributed

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to Lortie's (1975) autonomy-parity pattern. This pattern describes the tendency of teachers to maintain their autonomy and thus safeguard the particulars of their own classroom environments from others. Collaboration occurs only in low-cost forms such as the exchange of information and materials. Similarly, SLPs traditionally view themselves as therapists, rather than teachers: "They chose a particular professional field and wish to use the expertise they have developed" (Ehren, 2000, p. 221). This notion is closely associated with the conviction that the least collaborative form of speech-language therapy, the pull-out model, is the most efficient, at least according to the SLPs interviewed by Pershey and Rapking (2003). However, systematic reviews showed that classroom-based services are at least as effective as the pull-out therapy (Cirrin et al., 2010). In a survey conducted by Brimo and Huffman (2023), SLPs indicated that they utilized and preferred the pull-out model most of the time. In contrast, professional organizations of SETs in the United States (as well as in Europe) place significant emphasis on the importance of interprofessional collaboration (Strunk et al., 2019). The incorporation of collaborative techniques within preprofessional training programs has been demonstrated to increase the perceived value of IPP and enhance engagement with it (DeLuca et al., 2023; Pfeiffer et al., 2019). Consequently, studies have indicated that SETs place a high value on collaboration, given their identification as advocates for children with disabilities and the necessity to collaborate with other professionals (Hernandez, 2013).

The differing perceptions of the value of collaboration among different professional groups have been identified as a significant impediment to the implementation of IPP (Fabel-Lamla & Gräsel, 2020; Fischer et al., 2017). The following results illustrate the perceived value of IPP between CLTs and SETs on the one hand, and CLTs and SLPs on the other.

Wade et al. (1994) conducted a survey of CLTs (in total: $n = 154$) and SETs (in total: $n = 27$) from both collaborative and noncollaborative schools on attitudes toward IPP. One of their findings was that, in general, SETs were more interested in collaboration than CLTs, suggesting that this was due to perceived differences in their roles. Arndt and Werning's (2013) findings, based on interviews with CLTs and SETs, suggest that both professional groups generally hold a positive value for IPP. However, in a survey of CLTs and SETs (Gröhlich et al., 2015), most respondents expressed a negative view of collaboration. Two thirds of the respondents indicated that collaboration is characterized by prejudice and rejection, mutual competition, and one-sided interests.

A constructive and collaborative approach between CLTs and SLPs is regarded as a crucial element in their partnership, as evidenced by the findings of several researchers (Baxter et al., 2009; Green et al., 2019; Hartas, 2004). Conversely, a negatively perceived value of IPP has been identified by SLPs as the greatest obstacle to successful collaboration between CLTs and SLPs (Pfeiffer et al., 2019). Brimo and Huffman (2023) identified a discrepancy in the perceived value of IPP, with CLTs rating cooperation more positively than SLPs. This discrepancy may be attributed to the fact that CLTs perceived the purpose of IPP to be fulfilled in a unidirectional exchange of information, whereas SLPs expected a mutual benefit, which is in line with earlier findings by Baxter et al. (2009). This may be related to the autonomy-parity pattern, which is also evident in Girolamo et al. (2022). In the evaluation of case scenarios, CLTs initially elected to address the challenges associated with working with children with SLCN independently before seeking collaboration with SLPs, thereby maintaining their autonomy. In contrast, SLPs interviewed by Jago and Radford (2017) consistently reported positive perceptions of the benefits of collaboration with CLTs. This may be attributed to their perception of collaboration as a mutually beneficial partnership among equals.

Factors Influencing the Perceived Value of IPP

Nevertheless, the disparate professional backgrounds of CLTs, SETs, and SLPs do not fully account for divergent perceptions of IPP values. Professional groups also operate in markedly disparate contexts. The following factors were frequently identified as influencing perceptions of IPP values:

- Lack of time: Time constraints for developing agreements and engaging in collaborative planning are the most commonly reported barriers to effective cooperation (Arndt & Werning, 2013; Fischer et al., 2017; Green et al., 2019; Hartas, 2004; Luder, 2018; Neumann, 2019; Pfeiffer et al., 2019). Brimo and Huffman (2023) found that CLTs and SLPs experienced time constraints as barriers to a similar extent.
- Caseload: It is frequently posited that an elevated caseload is associated with a diminished propensity for collaboration, particularly when caseload sizes were onerous (Arndt & Werning, 2013; Green et al., 2019; Pershey & Rapking, 2003). Even though the participants in the study conducted by Green et al. identified the caseload as a barrier to collaboration, their statistical analysis of the data demonstrated that the caseload does not exert a significant influence on actual collaboration. This was corroborated by a study conducted by Pfeiffer et al. (2019). Neumann (2019) identified an inverse relationship between caseloads and collaboration, with higher caseloads being associated with increased collaboration.

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- Work experience: Individuals with greater professional experience are more inclined to engage in high-intensity collaborative work (Hernandez, 2013; Jago & Radford, 2017; Neumann, 2019; Pfeiffer et al., 2019).
- Lack of training in IPP: The ability to collaborate effectively cannot be acquired passively; rather, it is a skill that must be learned and developed through training. Individuals who lack requisite training engage in significantly less collaboration or in less-intensive forms (Brimo & Huffman, 2023; Hernandez, 2013; Pfeiffer et al., 2019; Strunk et al., 2019). However, this relationship was not observed in the study conducted by Green et al. (2019).
- Age: Drossel (2015), Luder et al. (2016), and Luder (2021) identified a correlation between age and the perceived value of IPP. Younger individuals tend to have a more favorable view of collaboration. However, Drossel (2015) posits that this holds true only when comparing individuals below the age of 30 years with those above the age of 50 years. She found no significant differences in the intermediate age group.
- School level: Evidence indicates that professionals at lower school levels are more likely to engage in collaborative practices than their counterparts at higher school levels (Muckenthaler et al., 2019; Pfeiffer et al., 2019).
- Number of school buildings/cooperating professionals: As the number of individuals engaged in a collaborative endeavor increases, the probability of further, more intimate collaboration decreases (Arndt & Werning, 2013). Moreover, Neumann (2019) and Pershey and Rapking (2003) explicitly addressed the number of school buildings for which a specific professional (i.e., SETs and SLPs) is responsible for. As this number increases, the time available for collaboration in each building decreases.

The majority of the studies referenced herein were conducted with relatively large samples (Brimo & Huffman, 2023; Drossel, 2015; Fischer et al., 2017; Green et al., 2019; Luder, 2018, 2021; Muckenthaler et al., 2019; Neumann, 2019; Pfeiffer et al., 2019; Strunk et al., 2019), ranging from a minimum of 109 participants (102 CLTs and seven SETs; Strunk et al., 2019) to a maximum of 2,470 participants (1,956 CLTs, 514 SETs; Luder, 2021). Conversely, the smaller studies (Arndt & Werning, 2013; Hartas, 2004; Jago & Radford, 2017; Luder et al., 2016; Pershey & Rapking, 2003) comprised samples of at least 10 (seven CLTs and three SETs; Arndt & Werning, 2013; and 10 SLPs in Jago & Radford, 2017) and at most 57 participants (34 CLTs and 23 SETs; Luder et al., 2016), with the latter group of studies primarily employing qualitative research methods (e.g., semistructured interviews, focus groups). Notably, one exception is the study by Pershey and Rapking (2003), which, despite its modest participant size (N = 17 SLPs), utilized quantitative methodologies. Conversely, the larger studies tend to adopt a quantitative design (Brimo & Huffman, 2023; Drossel, 2015; Fischer et al., 2017; Green et al., 2019; Muckenthaler et al., 2019; Neumann, 2019; Pfeiffer et al., 2019). Some studies employed a combination of quantitative and qualitative research methods (Hartas, 2004; Luder, 2021; Luder et al., 2016; Strunk et al., 2019). Given the heterogeneity of approaches, it is not possible to generalize the results of all studies to the same extent, and the reliability of these results varies. Consequently, cautious interpretation is warranted in some cases. Nevertheless, numerous factors have been identified that can either facilitate or impede successful implementation and, therefore, the perceived value of IPP; it remains unclear how these factors affect CLTs, SETs, and SLPs differently.

This Study

This study was conducted in the Canton of Bern, Switzerland. A Swiss canton can be compared to a state in the United States and has legislative powers. For example, the education system is controlled at the cantonal level. This means that the CLTs, SETs, and school-based SLPs surveyed here are all employed by the same administration, are all official members of the school staff, and are working according to the same guidelines. However, they possess disparate professional backgrounds, have different responsibilities when working with children with SLCN, and operate within distinct contexts. For example, there is a notable divergence in IPP training and the number of school buildings that a person is responsible for. While SETs in Switzerland receive comprehensive training in IPP, CLTs and SLPs are not provided with any such training unless they pursue it through postqualification training. Regarding the number of school buildings for which a given individual is responsible, it is typical for a CLT to be employed in a single school. In contrast, SETs or SLPs may be assigned to multiple school buildings. It is currently unclear whether CLTs, SETs, and school-based SLPs in Switzerland perceive the value of IPP differently, particularly in light of the various factors that may influence this perception, including lack of time, caseload, work experience, lack of training in IPP, age, school level, and number of school buildings.

As outlined in the last section, the influence of the perceived value of IPP among CLTs, SETs, and SLPs on the implementation of such collaboration has been the subject of comprehensive examination in a multitude of studies. It has been demonstrated that the perceived values held by the various groups in question can vary significantly. However, this finding is limited in two respects. First, the analyses only consider the comparison of dyads

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(Fabel-Lamla & Gräsel, 2020), in this case, either CLTs and SETs or CLTs and SLPs. The nature of the collaboration between the triplet CLT, SET, and SLP remains unclear. Second, the analyses are somewhat limited in scope, as they only consider whether perceived values are positive or negative. A paucity of studies has distinguished between various aspects of perceived value. Only Hernandez (2013), Gröhlich et al. (2015), Baxter et al. (2009), Jago and Radford (2017), and Brimo and Huffman (2023) employed a differentiated approach to examine the interest in and perceived benefits of collaboration. However, the perceived costs of IPP and its benefits for students are yet to be examined. To the best of our knowledge, no similar study has been conducted in Switzerland to date. Considering the aforementioned findings and research gap in Switzerland, the following research questions were identified:

1. Are there any significant mean differences between the professional groups CTLs, SETs, and SLPs in terms of their interest in collaboration, perceived benefits for the teacher, perceived benefits for the students, and perceived costs of collaboration between the professional groups CLTs, SETs, and SLPs? Furthermore, if such differences exist, what is the extent to which they manifest?
2. Does the perceived value of IPP differ between the groups due to the influence of predictors such as caseload, lack of training for IPP, age, school level, and number of school buildings? If such an effect is identified, what is the extent of the observed impact and how does it manifest itself?

Considering Research Question 1, it can be posited that the perceived value of SETs is the most favorable, given that they received extensive training for IPP. Moreover, CLTs may demonstrate higher values than SLPs as they were found to be satisfied even with low-cost forms of collaboration. Consequently, it is anticipated that SLPs will demonstrate the lowest levels of the perceived value of IPP. In light of Research Question 2, it can be assumed that in the groups, the perceived value of IPP will be affected differently by factors such as caseload, the lack of training for IPP, and the number of school buildings. This is because these factors differ greatly among CLTs, SETs, and SLPs. Conversely, the other factors (age and school level) will exert comparable influences on the three groups.

Method

Study Design and Questionnaire Development

The project entitled "SpriCH - Language Support Measures in Swiss Schools. The cooperation of multiprofessional teams in integrative settings" was implemented between August 2021 and July 2023. The primary objective was to gain insight into the current state of collaboration between CLPs, SETs, and school-based SLPs to support children with SLCN in mainstream schools. In March 2022, an online questionnaire was distributed to CLTs, SETs, and SLPs in the canton of Bern. The questionnaire was designed to ascertain the implementation of language support measures in the classroom (Section 1), self-assessment and mutual assessment of professional group-specific competencies (Section 2), frequency and intensity of various forms of IPP (Section 3), and perceived value of IPP (Section 4).

The first section of the questionnaire is based on the works of Blechschmidt et al. (2013), Section 2 is based on the works of Elksnin and Capilouto (1994), and Sections 3 and 4 are entirely based on the "Questionnaire on Teacher Cooperation" by Drossel (2015). The items used to survey the perceived value of IPP were part of the fourth section of the questionnaire. This section is divided into four subscales comprising a total of 37 items: interest (seven items), costs (eight items), benefits for the specialist (11 items), and benefits for the students (11 items). The Cronbach's alpha values of these scales range from .88 to. 93 and are therefore high to excellent, respectively. The explained variance of these scales ranges from 55.1% (costs) to 70.2% (interest; Drossel, 2015). As the questionnaire was originally designed for a single professional group (CLT), it was necessary to adapt and reformulate the items so that they could be answered similarly by CLTs, SETs, and SLPs. Moreover, the focus of collaboration has shifted from everyday schoolwork to the domain of language support measures. To illustrate this point, we examine an exemplary item from the "Benefits for Students" subscale. In the original version of the questionnaire, the item was phrased as follows: "Collaboration within the teaching staff helps to improve the quality of schoolwork." The version utilized in this study was as follows: "Collaboration with other professionals helps to improve the quality of language support measures." The survey was written in German, but the English translation of all items is available in Supplemental Material S1. The response scale for the 37 items comprises four levels: 0 = *strongly disagree*, 1 = *somewhat disagree*, 2 = *somewhat agree*, and 3 = *agree*. Because the scale in question has only four levels, it is imperative that the data be treated as an ordinal scale (Byrne, 2010). To facilitate comparison between scales, the items for the scale "costs" were inverted, as all the items were phrased in a negative form. Consequently, an elevated score on the cost response scale is indicative of a favorable stance towards IPP.

The wording of all items was pretested as part of cognitive interviews (Prüfer & Rexroth, 2005) in August

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and September 2021, with a total of 21 individuals (five CLTs, eight SETs, and eight SLPs) and continuously revised to eliminate ambiguous wording whenever possible. As part of the statistical pretesting phase, the complete questionnaire was administered in October 2021. A total of 278 participants (58 CLTs, 65 SETs, and 155 SLPs) from various cantons in German-speaking Switzerland (excluding the Canton of Bern) completed the survey. Subsequently, the data were processed, analyzed, and presented in a descriptive form. Statistical analysis of the data yielded evidence indicating the necessity for adaptations or the elimination of certain subscales and scale items in Sections 1 and 3 of the questionnaire, but not in Section 4. The revised version of the questionnaire required 20–25 min to complete. The Cronbach's alpha reliability coefficients in Section 4 ranged from .82 to .92, indicating that the subscales measuring interest, perceived costs, perceived benefits for the specialist, and perceived benefits for the students exhibited good to excellent reliability values. As demonstrated by the standardized root-mean-square residual (SRMR) values, the measurement models of the aforementioned subscales exhibited a very good level of fit, with values ranging from .02 to .04. Further details regarding the evaluation of the questionnaire can be found on the project's website (http://www.phbern.ch/projekt-sprich).

While some of the values employed in the analysis of predictor influence could be expressed in absolute numbers (such as age and the number of schools for which a person is responsible), others were transformed or calculated. The caseload was calculated by dividing the number of weekly lessons for which a person was employed by the number of children for whom a person was directly responsible (in other words, the number of lessons per child). This approach was adopted because CLTs are typically responsible for all children (i.e., the entire class) at the same time (i.e., the entire lesson), whereas SLPs often work with one child at a time. The number of lessons available per child allowed for a comparison of caseloads between professional groups. In light of the possibility that an individual may be employed concurrently in multiple grades or cycles, multiple responses were permitted in this instance. The predictor for grade was evaluated based on the highest cycle indicated, even when an individual was also engaged in lower level cycles. To measure IPP competencies, the question "In which areas do you have a high level of competency?" was employed to ascertain an individual's strengths through self-declarations. Among the competencies included in the survey, the ability to collaborate with professionals from different disciplines was available for selection or nonselection.

Following the data collection and data cleansing process, the analyses were conducted with regard to the implementation of language support measures in the classroom (see Till & Kolb, 2023) and the self-assessment and mutual assessment of professional group-specific competencies (see Till & Kolb, 2024). Further analysis is subsequently presented.

Participants

To guarantee the legitimacy of the study, the Department of Education and Culture of the Canton of Bern was first approached for support. Subsequently, all head teachers of regular schools (kindergarten to ninth grade) in the Canton of Bern were contacted (N = 389) and invited to participate in the survey. As the response rate following this initial phase was insufficient (after 4 weeks, only 30 CLTs, 28 SETs, and 13 SLPs completed the survey), the three professional groups were contacted directly in the second phase via the respective professional organizations (Bildung Bern for CLTs and SETs and Logopädie Bern for SLPs). As the smallest professional group, SLPs employed in primary schools (N = 147) were contacted via telephone to invite them personally to participate in the survey. Moreover, they were asked to extend an invitation to CLTs and SETs with whom they were working to participate. The survey was conducted on a voluntary basis, with no other personal data collected apart from age in years and gender. Apart from the question on classification into the CLT, SET, or SLP occupational group, no other mandatory questions were posed. Participants were informed of this immediately at the outset of the survey and were then able to consent to or decline participation. This resulted in the collection of data from 150 CLTs, 97 SETs, and 90 SLPs for a total of 337 participants. Subsequently, the data were cleaned and prepared for statistical analysis. During this process, a total of 20 individuals were excluded from the data set; as the corresponding information was largely incomplete (completion less than 10%: n = 2), the individuals were not employed in the Canton of Bern (n = 11) or they did not belong to the defined target group (n = 7). The remaining 317 individuals were distributed across the three occupational groups (see Table 1). This table also presents the characteristics of the most important variables.

Statistical Analyses

The data were subjected to confirmatory factor analysis (CFA) using the MPlus software (Version 8.10; Muthén & Muthén, 2024). In this process, latent factors called "interest," "costs," "benefits for the specialist," and "benefits for the students" were calculated by combining the factor loadings of the observed variables. Given that the observed variables were measured on an ordinal scale, the weighted least square mean and variance adjusted estimator was employed (Wang & Wang, 2020). Although the factors interest, cost, benefits for the specialist, and benefits

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Table 1. Sample description and analyses.

Characteristics	Sample (N = 317)			Statistical comparison (effect size)
	CLT (n = 142)	SET (n = 89)	SLP (n = 86)	
Female participants (percentage)	126 (88.7%)	83 (93.3%)	84 (97.7%)	p = .040 (weak)
Age in years: M (SD)	40.5 (11.3)	42.0 (10.5)	42.0 (11.9)	n.s.
Lessons per student: M (SD)	0.8 (0.5)	0.8 (0.9)	0.8 (0.2)	p = .018 (weak)
No. of school buildings: M (SD) grade	1.2 (0.6)	2.2 (1.4)	7.9 (7.2)	p < .001 (medium–strong)
Cycle 1	44.4%	60.7%	96.5%	p < .001 (medium)
Cycle 2	44.4%	53.9%	91.9%	p < .001 (medium)
Cycle 3	23.2%	28.1%	39.5%	p = .031 (weak)
High competencies in IPP (percentage of "yes" answers)	49.3%	64.0%	9.3%	p < .001 (medium)

Note. CLT = classroom teacher; SET = special education teacher; SLP = speech-language pathologist; Cycle 1 = kindergarten to second grade; Cycle 2 = third to sixth grade; Cycle 3 = seventh to ninth grade; IPP = interprofessional practice; n.s. = not significant.

for the students load on a second factor called "value" according to Drossel (2015), the subscales were analyzed individually due to the failure to meet the sample size recommendations (n = 100 for each subgroup; Wang & Wang, 2020). Therefore, extending the model beyond this level was deemed inappropriate.

To determine whether any differences existed between the groups, the mean values of the factors were compared model by model. This is addressed in Research Question 1. The CLT group served as the reference group. However, SETs were designated as the reference group for the comparison between SETs and SLPs. In the final stage of the analysis, the impact of each predictor was examined individually using structural equation modeling in accordance with the objectives of Research Question 2. To achieve this, the slopes, significance values, and variance explanations of the aforementioned factors were analyzed. The significance of a predictor in improving the model was determined using the chi-square difference test. The model in which the influence of the predictor on the factor is fixed at zero serves as a point of comparison (null model). If the fit indices of the model with the predictor are significantly superior to those of the null model, the predictor is assumed to be a crucial addition to the model. Given that multiple tests were conducted, a Type 1 error correction was required. When applying the Benjamini–Hochberg procedure with a false discovery rate of 5%, the value of p = .012 serves as the new threshold for significance.

Preliminary Statistical Analyses

An overview of the frequencies of the selected scale levels was provided prior to undertaking analyses of group differences and potential predictors. Furthermore, it is essential to ascertain the general comparability of the subgroups in this sample, especially regarding the various variables that represent the chosen predictors.

Moreover, as the same questionnaire on the perceived value of IPP was completed by three distinct professional groups for the first time, it was imperative to assess measurement invariance. As the methods for continuous data are inapplicable to ordinal data, the methodology proposed by Svetina et al. (2020) was employed. If less than 20% of the thresholds and loadings vary between groups, partial measurement invariance may be assumed (Dimitrov, 2010). When interpreting the chi-square difference tests of the various models, it is recommended that SRMR be consulted, as this has been demonstrated to be a stable and meaningful value for ordinal data (Shi & Maydeu-Olivares, 2020). The values for root-mean-square error of approximation and comparative fit index on the other hand are often "overinflated" (Savalei, 2021).

Additionally, Asparouhov and Muthén (2022) recommended the use of univariate and bivariate contingency tables to facilitate a comparison between the observed and estimated frequencies. The lower the number of discrepancies (significant residuals) between the observed and estimated values, the greater the degree of fit between the model and data.

Results

Sample Analyses

As Table 1 clearly demonstrates, the three occupational groups exhibited several significant differences. It is typical for CLTs, SETs, and SLPs to belong to occupational groups with a high proportion of female employees. It is noteworthy that the proportion of women was the lowest in the CLT group and the highest in the SLP group. Nevertheless, this statistically significant difference is of minor importance (Fisher's exact test: p = .040, Cramer's V = .14). In contrast, no statistically significant

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difference in age was observed, Kruskal–Wallis: $\chi^2(2) = 1.42$, $p = .492$. With regard to caseloads, it is notable that despite an average of 0.8 lessons per child across all occupational groups, statistically significant differences persist due to the high standard deviations, Kruskal–Wallis: $\chi^2(2) = 8.08$, $p = .018$, particularly among SETs. The most notable discrepancies were observed between SETs and SLPs ($z = -2.76$, $r = .21$). Nevertheless, the magnitude of this discrepancy was relatively modest. These discrepancies become more evident when the number of school buildings for which an individual is responsible is considered. The statistical difference was significant, and the corresponding effect sizes were medium to high, Kruskal–Wallis: $\chi^2(2) = 172.45$, $p < .001$; CLT versus SET: $z = -5.27$, $r = .35$; CLT versus SLP: $z = -13.13$, $r = .87$; SET versus SLP: $z = -7.22$, $r = .55$. Furthermore, it is important to examine the distribution of occupational groups across the three cycles in the Swiss school system. Notably, the proportion of participants declined from kindergarten to Grade 2 (Cycle 1; exact Fisher test: $p < .001$, Cramer's V = .45), Grades 3–6 (Cycle 2; $\chi^2(2) = 52.17$, $p < .001$, Cramer's V = .41), and Grades 7–9 (Cycle 3; $\chi^2(2) = 6.96$, $p = .030$, Cramer's V = .15). It is also noteworthy that in light of the potential for multiple responses, it becomes evident that CLTs are primarily engaged in a single cycle, whereas SETs and SLPs frequently operate across multiple cycles. This is particularly evident in the case of SLPs who are predominantly engaged in Cycles 1 and 2. The corresponding differences were significant at each school level. The observed effect sizes were relatively low in Cycle 3 and of medium magnitude in Cycles 1 and 2. Ultimately, when considering the statements of an individual's strength in IPP, notable discrepancies emerged, $\chi^2(2) = 58.34$, $p < .001$, Cramer's V = .43. Most SETs (67%) indicated that they possessed high proficiency in IPP. Approximately half of the CLTs made the same assertion, while only under 10% of the SLPs identified IPP as a strength. Considering the aforementioned discrepancies among occupational groups, it is reasonable to conclude that these discrepancies will also manifest in a different perceived value of IPP, albeit to varying degrees.

Item Analyses

When observing the selected levels (from 0 = *strongly disagree* to 3 = *agree*) on the scales of interest, cost, benefits for the specialist, and benefits for the students (see Supplemental Materials S2–S6), the frequencies generally indicated a positive rating with minimal variation. It is noteworthy that items cost4 ("I would have to save time on other important things in order to collaborate with the other specialists"), bensp5 ("By collaborating with the other specialists, I save time in the long term."), and benst8 ("Collaboration with the other specialists helps to develop joint materials for language support.") deviate from the aforementioned pattern, with Scale Levels 0 and 1 exhibiting relatively larger frequencies than the rest of the items. While the frequencies exhibited by all groups tended to be situated within the upper range of the various scales, it is evident that the full range (0–3) was employed. A small number of items were not selected at the lowest level (0 = *strongly disagree*) by at least one group. To guarantee the absence of empty cells in the variance matrix, Scale Levels 0 and 1 were collapsed accordingly (Svetina et al., 2020). With regard to items intr1 ("I find cooperation with other specialists useful.") and intr6 ("Collaboration with other specialists is important to me."), it is noteworthy that Levels 0 and 1 ("somewhat disagree") were also not selected in at least one of the groups. This suggests that these items are dichotomous and, as a result, are not appropriate for planned analyses. These items are excluded from the data set.

Moreover, upon analysis of the configurational models during CFA, Item 8 in the "costs" scale of the SET group was found to have a low factor loading of $\lambda = .11$, indicating that it may not be a reliable measure of the construct it is intended to represent. Since the factor loading was below the cutoff point of $\lambda = .30$, as proposed by Wang and Wang (2020), this item was excluded from the subsequent analyses.

Measurement Invariance

The approach proposed by Svetina et al. (2020) was employed to establish measurement invariance of the scales measuring interest, perceived costs, perceived benefits for the specialist, and perceived benefits for the students between CLTs, SETs, and SLPs. While only partial measurement invariance could be established for the "benefits for the specialist" scale, full measurement invariance is given in all the other instances. The final models are depicted in Figures 1–4. For a comprehensive overview of the analyses, please refer to Supplemental Material S5.

Research Question 1

The first research question pertains to group differences. Once full measurement invariance was established for all models (with partial measurement invariance for the "benefits for the specialist" scale only), it was possible to compare the mean values relating to the latent factors between the CLT, SET, and SLP groups (see Table 2).

The data demonstrate a notable discrepancy between SETs and CLTs on the "interest" scale, with SETs exhibiting higher values to a statistically significant extent than CLTs ($M = 0.9$, $p < .001$). The small negative deviation of SLPs ($M = -0.0$, $p = .934$) when compared with CLTs was not statistically significant. A notable discrepancy exists

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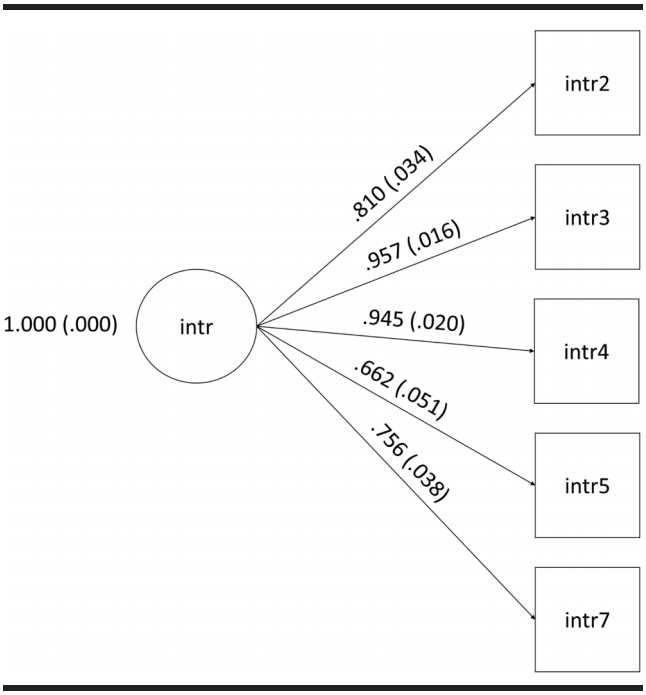
Figure 1. Full measurement invariance model of the "Interest" scale.



between SETs and SLPs, with the latter exhibiting a markedly lower value ($M = -1.0$, $p < .001$). With respect to the "costs" scale, a significant difference was observed between SETs and CLTs ($M = 0.3$, $p = .020$), resulting in a higher

Figure 2. Full measurement invariance model of the "Costs" scale.

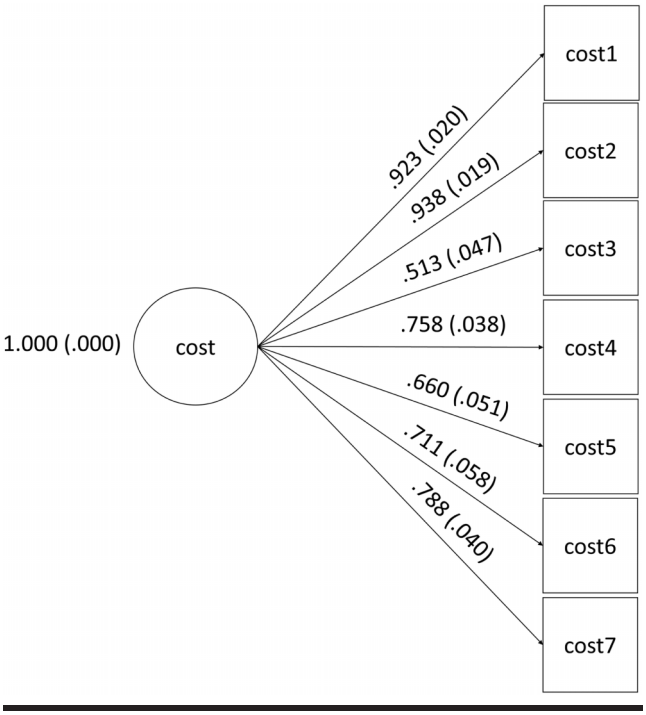
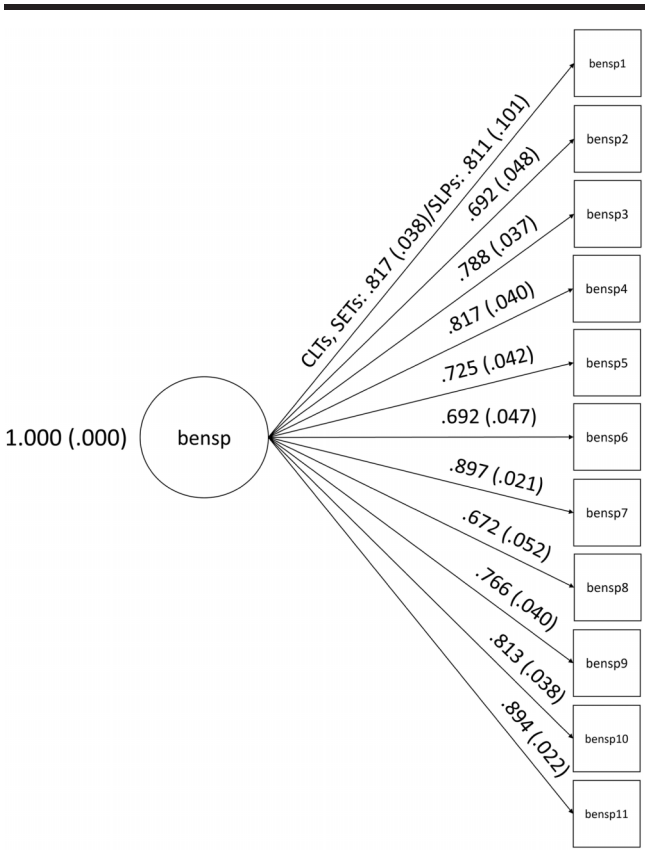


Figure 3. Partial measurement invariance model of the "Benefits for the Specialist" scale. CLTs = classroom teachers; SETs = special education teachers; SLPs = speech-language pathologists.



mean value for the SETs. In contrast, the SLPs demonstrated a significantly lower mean compared to both the CLTs and SETs, with a notable discrepancy of $M = -0.5$ ($p = .002$) and $M = -0.8$ ($p < .001$), respectively. With respect to the "benefits for the specialist" scale, SETs exhibited significantly higher values than CLTs ($M = 0.5$, $p = .002$). The SLP values were again lower than those of the CLTs ($M = -0.3$, $p = .055$) and SETs ($M = -0.8$, $p < .001$), with only the latter differing significantly. Finally, on the "Benefits for the Students" scale, the SETs exhibited significantly higher values than the CLTs, with a mean difference of $M = 0.5$ ($p = .001$). However, the SLP's negative difference in the values of the CLTs was not statistically significant ($M = -0.2$, $p = .124$), but their difference in the values of the SETs was statistically significant ($M = -0.7$, $p < .001$).

Research Question 2

The final measurement models were utilized to investigate the impact of various predictors on perceived value (Research Question 2), as illustrated in Table 3. It can be concluded that "interest" is significantly influenced

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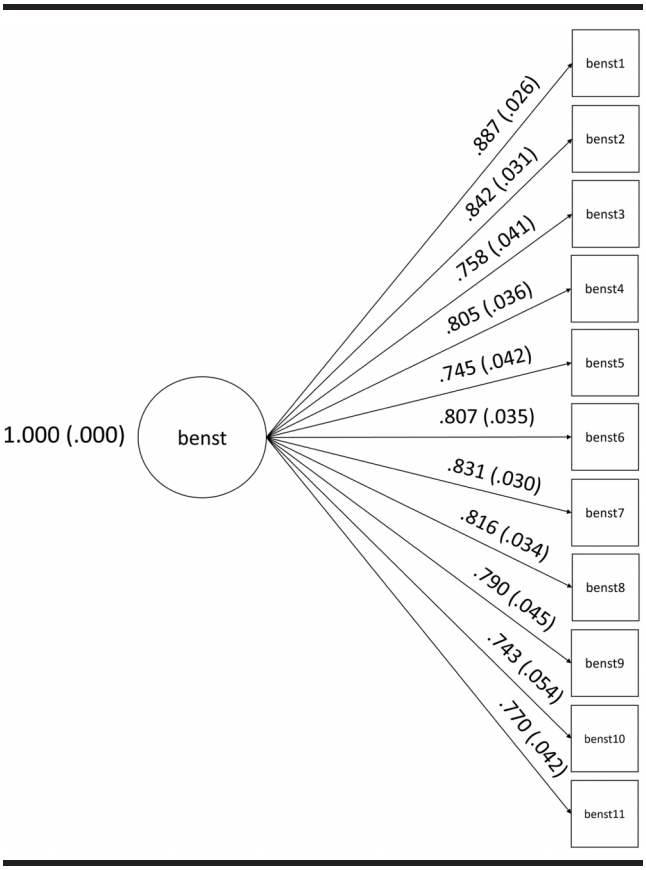
Figure 4. Full measurement invariance model of the "Benefits for the Student" scale.



by the reported competencies in IPP and school level. An individual who self-reports high competency in the domain of IPP exhibits a higher value on this scale (β = .35 [CLTs] or β = .74 [SLPs]) than someone who does not report high competency. In contrast, the observed increase in the SET group (β = .13, p = .351) was not statistically significant. The proportion of variance explained was notably high in the SLP group (54.3%). The model with the predictor "competencies in IPP" exhibited a significantly superior fit to the model without this predictor, $\Delta\chi^2(3) = 42.36$, p = .001. In the CLT group, the predictor "Cycle 1" (school level with Cycle 3 as reference) is associated with significantly higher values on the "interest" scale for CLTs, with a coefficient of β = .32. This indicates that the lower the school level at which CLTs work, the higher is their interest, and vice versa. Other groups were not significantly affected by this influence. The model incorporating the predictor "Cycle 1" demonstrated a significantly superior fit to the null model, $\Delta\chi^2(3) = 11.35$, p = .010.

It is not possible to identify similarly significant influences on the scale measuring costs. In the CLT group, the predictor "competencies in IPP" had a positive effect, with the mean value of individuals with corresponding competencies being β = .22 higher than for individuals without these competencies. Nevertheless, this accounted for only 4.7% of the total variance. The measurement model with the aforementioned predictor did not differ significantly from that without the predictor, $\Delta\chi^2(3) = 5.17$, p = .160.

The "benefits for the specialist" scale is again found to be significantly influenced by the predictor "competencies in IPP." It can be observed that CLTs who indicate proficiency in the domain of collaboration exhibit a mean score on the corresponding scale of β = .26 points higher. Similar trends were observed for SETs and SLPs, although they lacked statistical significance. However, the model with the predictor differed significantly from that without the predictor, $\Delta\chi^2(3) = 11.42$, p = .009. One can see a significant influence of the predictor "school level" in the CLT group in Cycle 1, with an increase of β = .23 on the scale compared to CLTs working in Cycle 3. Owing to Type 1 error correction, the comparison of the predictor model with the null model did not reach significance (p = .028). Moreover, a notable effect was observed with regard to the predictor "number of school buildings." Both the CLTs (β = .12) and SLPs (β = .09) exhibit a significantly higher value on the "benefits for the specialist" scale in relation to the number of school buildings in which they are employed. However, the model with this predictor did not yield a significantly superior result compared to the model without this predictor, $\Delta\chi^2(3) = 5.93$, p = .115.

The "Benefits for the Students" scale is significantly influenced by two predictors, as evidenced by the results of the analysis. The predictor "competencies in IPP" was once more associated with higher values on this scale. The mean value observed in CTLs who ascribe high

Table 2. Factor means and group differences with the classroom teachers (CLTs) acting as the reference group.

Variable	Mean values		Significance tests		
Factors	**SET**	**SLP**	**CLT vs. SET**	**CLT vs. SLP**	**SET vs. SLP**
Interest	0.9	–0.0	p < .001	p = .934	p < .001
Costs	0.3	–0.5	p = .020	p = .002	p < .001
Benefits for the specialist	0.5	–0.3	p = .002	p = .055	p < .001
Benefits for the students	0.5	–0.2	p = .001	p = .124	p < .001

Note. SET = special education teacher; SLP = speech-language pathologist.

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Table 3. Predictor analysis and chi-square difference test with the null model.

Variable	CLT			SET			SLP			Chi-square difference test		
Predictors	β	***SE***	R^2	β	***SE***	R^2	β	***SE***	R^2	$\Delta\chi^2$	Δdf	***p***
Interest												
Caseload	.14	.09	.02	−.03	.14	.00	−.04	.09	.00	2.64	3	.451
Competencies in IPP	.34**	.11	.11	.13	.14	.02	.74***	.07	.54***	42.36	3	< .001
Age	−.08	.11	.01	−.18	.13	.03	−.22	.12	.05	5.44	3	.142
School level (reference: Cycle 3)												
Cycle 1	.32**	.11	.10	.14	.11	.02	−.25	.24	.06	11.35	3	.010
Cycle 2	.00	.12	.00	−.05	.15	.00	−.03	.15	.00	0.16	3	.983
No. of school buildings	.05	.11	.00	.09	.15	.01	.15	.11	.02	2.16	3	.540
Costs												
Caseload	−.01	.07	.00	.18*	.09	.03	.02	.10	.00	2.23	3	.527
Competencies in IPP	.22*	.10	.05	.11	.14	.01	.08	.22	.01	5.17	3	.160
Age	−.01	.10	.00	.14	.13	.02	.18	.11	.03	3.48	3	.324
School level (reference: Cycle 3)												
Cycle 1	.07	.11	.00	.05	.14	.00	.30	.18	.09	2.29	3	.515
Cycle 2	.06	.11	.00	−.03	.15	.00	.01	.14	.00	0.35	3	.950
No. of school buildings	.11	.10	.01	−.15	.12	.02	−.07	.10	.00	3.02	3	.389
Benefits for the specialist												
Caseload	.04	.08	.00	.09	.09	.01	−.08	.11	.01	1.52	3	.679
Competencies in IPP	.26*	.10	.07	.22	.13	.05	.26	.18	.07	11.42	3	.009
Age	−.11	.10	.01	−.18	.10	.03	−.22	.11	.05	7.81	3	.050
School level (reference: Cycle 3)												
Cycle 1	.23*	.10	.05	.15	.12	.02	−.12	.09	.02	9.09	3	.028
Cycle 2	.02	.11	.00	−.02	.13	.00	.07	.14	.01	0.36	3	.948
No. of school buildings	.12*	.05	.02	−.11	.10	.01	.09*	.10	.01	5.93	3	.115
Benefits for the students												
Caseload	.02	.08	.00	.03	.11	.00	.00	.09	.00	0.13	3	.989
Competencies in IPP	.36***	.10	.13	.15	.14	.02	.32*	.15	.10	18.69	3	< .001
Age	−.06	.10	.00	−.16	.12	.03	−.33**	.11	.11	10.28	3	.016
School level (reference: Cycle 3)	−.24**	.09	.06	−.20	.11	.04	.07	.12	.01	11.20	3	.011
Cycle 1	.26**	.10	.07	.14	.14	.02	.46***	.11	.21	18.34	3	< .001
Cycle 2	−.08	.11	.01	.12	.13	.02	−.20	.13	.04	3.55	3	.314
No. of school buildings	.12	.09	.01	−.02	.09	.00	.03	.11	.00	1.59	3	.661

Note. CLT = classroom teacher; SET = special education teacher; SLP = speech-language pathologist; IPP = interprofessional practice; Cycle 1 = kindergarten to second grade; Cycle 2 = third to sixth grade; Cycle 3 = seventh to ninth grade; level of significance: *p = < .05; **p = < .01; ***p < .001.

competencies in IPP is β = .36, which is higher than that observed in individuals who do not report these competencies. A comparable relationship was evident for SLPs (β = .32). Overall, the predictor accounted for 13.2% of the variance in CLTs and 10.0% in SLPs. The model with the predictor was significantly superior to that without the predictor, $\Delta\chi^2(3) = 18.69$, $p < .001$. The predictor "school level" (reference: Cycle 3) is also significant and associated with significantly higher scale values for CLTs when working in Cycle 1, with an increase of β = .26. This effect was also observed in the SLP groups. SLPs working in Cycle 1 demonstrated an increased value on this scale by β = .46 when compared with SLPs working in Cycle 3. The model incorporating this predictor demonstrated superior performance compared to the model lacking it, $\Delta\chi^2(3) = 18.34$, $p < .001$. Moreover, the predictor "age" merits further consideration. In the SLP group, a negative correlation was observed between age and the "Benefits for Students" scale, with older individuals exhibiting lower values (β = −.33). The proportion of the variance explained was 11.1%. It is important to note that this effect does not apply to CLTs or SETs. The model

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incorporating the predictor "age" also failed to reach significance due to Type 1 error correction ($p = .016$).

The predictor "caseload" was found to exert no significant influence in any of the cases analyzed. Furthermore, the variable "number of school buildings" was found to exert only an insignificant influence on the perceived value of IPP. The primary factors influencing perceived value are "competency in IPP" and "school level," especially Cycle 1. These factors exert a predominantly significant influence on the CLT and SLP groups. The variables under examination were found to exert no significant influence on SETs in any of the cases analyzed. This suggests that the perceived value of IPP observed in this group is, on average, higher than that observed in the other two groups (see Research Question 1), irrespective of the level of competency at IPP or school level. The addition of these two predictors did not significantly alter the already high values observed in the SET group.

Discussion

To provide effective support for children with SLCN in educational settings, it is essential to have a multidisciplinary approach that draws on the expertise of various specialists (Archibald, 2017). While CLTs can provide language support for children with SLCN during regular lessons, SETs offer supplementary language facilitation and SLPs are primarily responsible for the implementation of speech-language therapy when required (Ehren, 2000).

It is essential that these disparate measures of language support be coordinated to capitalize on potential synergies for the benefit of the child (Hernandez, 2013). Therefore, collaboration (IPP) is essential for the aforementioned professionals.

Regarding the expectancy-value model proposed by Wigfield and Eccles (2000), the success of IPP is partially contingent upon the perceived value of IPP by the individuals involved. While a positive perception of value encourages motivation to implement even challenging forms of IPP, a negative perception of value is perceived as an impediment (Armstrong et al., 2023; Pfeiffer et al., 2019).

The present study represents the first occasion in which the perceived value of IPP between CLTs, SETs, and SLPs was analyzed simultaneously using the same instrument. Since the survey was restricted to the Canton of Bern (Switzerland), the CLTs, SETs, and SLPs in this study were all working in schools, employed by the same administration, and bound by the same guidelines.

The questionnaire used was an adaptation of a teacher questionnaire by Drossel (2015). This adaptation was successfully evaluated in cognitive and statistical pretests. After (partial) measurement invariance was demonstrated, the questionnaire appeared to be a suitable instrument for comparing the perceived value of IPP among the three professional groups.

A comparison of the mean factor values of the three occupational groups revealed that SETs had the highest values on each scale, a finding that was not reported in any of the studies mentioned. The interest factor was most pronounced among those in the SET group, whereas there was no significant difference in the values assigned to those in the CLT and SLP groups. With regard to the perceived costs of collaboration (i.e., on the inverted scale), the SETs group exhibited the highest values, while the SLPs demonstrated the lowest. The values assigned to the CLTs fall between the two aforementioned extremes. This indicates that SETs do not hold a negative view of the personal costs of IPP, whereas SLPs perceive costs in the least favorable light. The perceived benefits for the specialists themselves were again rated most positively by SETs and most negatively by SLPs. The CLTs occupy a position between the other two groups, yet do not differ significantly from the values of the SLPs. The perceived benefits of IPP for students were once more rated highest by the SETs, with no discernible difference between the CLTs and SLPs in this assessment.

In partial agreement with the findings of Baxter et al. (2009) and Brimo and Huffman (2023), it can be observed that the value of perceived costs of collaboration of CLTs is more favorable than that of SLPs, while there are no significant differences in the other subcategories. However, it remains uncertain whether this is attributable to the fact that CLTs, in contrast to SLPs, are already content with less demanding forms (or low-cost forms) of collaboration given the quantitative nature of the data presented in this report.

However, it is important to note that the values (especially in comparison with the reported study results) of all three professional groups are rather positive, thus contradicting the findings of Gröhlich et al. (2015). SETs differed from the other two groups in that their perceived value was even more positive, exhibiting a greater degree of positivity than the other two groups.

Although Drossel (2015) posits that a positively perceived value of IPP predicts the frequency and intensity of IPP in action, Green et al. (2019) and Stommel et al. (2014) identified a significant discrepancy between a positively perceived value of IPP and a limited degree of collaboration in practice. This may be due to other contextual influences.

Upon analysis of the influence of various contextual factors on these values, it becomes evident that the predictors "competencies in IPP" and "school level" are particularly significant. A person's self-reported proficiency in IPP has

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been found to consistently exert a favorable impact on the aforementioned values. This effect is analogous to the role of expectations (e.g., "Am I able to successfully collaborate?") as posited in the expectancy-value model. A person who reports high competencies in IPP is likely to anticipate a favorable outcome of collaboration and, in general, ascribe greater value to IPP. Whether this effect influences the frequency and intensity of actual collaboration is yet to be determined. Consequently, this does not contradict the findings of Drossel (2015).

School level also had a positive effect. While CLTs and SLPs working in Cycle 1 almost always show a more positive outcome on various scales compared to those working in Cycle 3, individuals working in Cycle 2 show no such differences. This finding is consistent with those reported by Brimo and Huffman (2023), Hernandez (2013), Pfeiffer et al. (2019), Strunk et al. (2019), and Muckenthaler et al. (2019), who reported that professionals working in higher levels of schooling are less likely to engage in collaboration. Contrary to the findings of Neumann (2019) and Pfeiffer et al. (2019), the number of school buildings exerted a negligible influence on the values, despite the pronounced disparities between professional groups.

Similarly, age had a negligible effect on these results. In contrast, for the SLP group, an increase in age was associated with a negative assessment of the benefits for the students, which is in line with the findings of Drossel (2015), Luder et al. (2016), and Luder (2021).

Caseload, however, never reached a level of significance, which aligns with the findings of Green et al. (2019) and Pfeiffer et al. (2019). Therefore, neither the negative (Arndt & Werning, 2013; Pershey & Rapking, 2003) nor positive (Neumann, 2019) impact of caseload was substantiated in this study. This discrepancy may be attributed to the fact that despite the notable differences between the professional groups, the calculated caseload (lessons per child) results in a similarly high workload within the groups, even when the implementation of the work (lessons with whole classes vs. therapy in an individual setting) is organized in a markedly disparate manner.

It is essential to consider the constraints of the research design used in examining the findings presented herein. In this context, it is particularly important to include sample size. Considering the planned analyses, the sample size is limited. Although this sample size is relatively large compared to those in the cited literature, the analyses conducted are of a complex nature, necessitating a certain degree of statistical power. Only the most important analyses were presented as part of this study.

Furthermore, it can be assumed that the sample was self-selective, indicating that only individuals who were interested in and committed to IPP participated. This explains the positive perceived value observed in this study. It is also recommended that the predictor "competencies in IPP" be viewed with a degree of skepticism given that respondents were explicitly asked to indicate a high level of proficiency in this area. The absence of such an indication does not necessarily indicate the complete absence of skills; rather, it suggests that these individuals may not possess proficient skills.

Nevertheless, the findings presented herein are reliable and warrant further investigation. It is evident that there is a need for specific teaching of competencies for IPP in the training courses of all three professional groups, as well as the cultivation of collaboration at the secondary school level, despite the limitations that have been reported. Furthermore, it would be beneficial to examine whether the consistently positive perceived value of IPP observed in this sample is reflected in the frequency and intensity of actual collaboration.

Conclusions

The findings indicate that the perceived value of IPP of CLTs, SETs, and SLPs toward IPP are predominantly positive. However, notable discrepancies were observed between the groups. The highest values were achieved by SETs, the only professional group specifically trained in IPP (at least in Switzerland). It would be beneficial to integrate these training elements into the study programs of other professional groups. Furthermore, the training should be designed not only for the lower grades of school but also for the upper levels, as IPP is equally important at both levels. The relationship between groups' positive perceived values and their actual collaborative practices still needs to be investigated.

Ethics Statement

The ethical and legal principles of the Bern University of Teacher Education were and will be respected throughout the research project. No ethical concerns have been raised by the university committee.

Data Availability Statement

As further analyses and publications are still pending, the publication of the data is currently not planned.

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