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# INSTRUCTIONAL THEORY FOR LANGUAGE LESSONS

A Design Study to Validate the Communities of Learners Concept  
in the Language Curriculum

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Abstract. Since the Lisbon Summit in 2000, reducing school dropout rates has a high priority in Europe, especially in pre-vocational tracks in secondary education. One policy issue is improving the match between pre-vocational secondary and senior secondary vocational education and allows a stronger focus on practical work in vocational education. Therefore, more and more schools for secondary pre-vocational education in the Netherlands set out a specific language education policy relating the language arts curriculum to the vocational curriculum. One assumes that students will be more motivated for language lessons when they are engaged in rich contexts, in meaningful language activities which they experience as relevant, since it serves a clear communicative purpose.

To guide this process of curriculum integration we set out an instructional theory for language education in the setting of pre-vocational education. In this paper we present four course design parameters that constitute our interpretation of a community of learners for secondary pre-vocational L1-learning: 1) language learning as a meaningful activity; 2) language learning as a reflective activity; 3) language learning as a shared activity and 4) language learning as a focus on transferable learning outcomes. To check explore the practicality and theoretical value, we set up a design experiment as a collaborative enterprise of teachers and researchers, in which these parameters guided the joint enterprise. We confronted the theoretical framework with the analysis of a single case study, the design experiment, to elaborate and validate this set of four design parameters. Therefore, we operated at three curriculum representations: the (1) intended; (2) implemented; and (3) perceived curriculum. Discriminating these three representations served as data to review and revise the designed lessons as we ran them in two classes, as well as to adjust and refine the conceptual framework. The results show that the designers incorporated all four parameters and that all four contributed to the design somehow. Furthermore, we are better informed

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what kind of learning activities the four parameters can and can not generate, and how the four parameters interact in means-end relations.

Key words: L1-curriculum, Communities of Learners (CoL), pre-vocational secondary education, design study.

### Dutch

[Translation Tanja Janssen]

TITEL. Het valideren van het concept 'leergemeenschap' in het moedertaalonderwijs; een ontwerp onderzoek.

SAMENVATTING. Sinds de Europa-top in Lissabon in 2000, heeft het terugdringen van schooluitval een hoge prioriteit gekregen in Europa, in het bijzonder in het voorbereidend middelbaar beroepsonderwijs. Een van de beleidsvoornemens is om de aansluiting tussen het voorbereidend en middelbaar beroepsonderwijs te verbeteren, en een sterker te leggen op praktijkwerk in het beroepsonderwijs. Daarom zijn steeds meer scholen voor voorbereidend beroepsonderwijs erop gericht verbanden te leggen tussen het taalonderwijs en de beroepsgerichte vakken. Men neemt aan dat leerlingen meer gemotiveerd zullen zijn voor de taallessen, als zij taal kunnen gebruiken in rijke contexten, met betekenisvolle taalactiviteiten die leerlingen relevant vinden, omdat ze een duidelijk communicatief doel hebben.

Om dit proces van curriculumintegratie te begeleiden, ontwierpen wij een onderwijsleertheorie voor taal in het voorbereidend beroepsonderwijs. Vier ontwerpregels maken deel uit van onze interpretatie van een "community of learners" (leergemeenschap) voor taal in het voorbereidend beroepsonderwijs: 1) taal leren is een betekenisvolle activiteit; 2) taal leren is een reflectieve activiteit; 3) taal leren is een gedeelde, gezamenlijke activiteit, en 4) taal leren is gericht op transfer. Om de praktische bruikbaarheid en theoretische waarde van deze parameters te onderzoeken, voerden wij een ontwerpexperiment uit in samenwerking met docenten, waarbij de parameters de leidende principes waren. We confronteerden het theoretische raamwerk met de analyse van één case, het ontwerp experiment, om de parameters te valideren. Data werden verzameld op drie curriculum niveaus; (1) het curriculum zoals bedoeld; (2) het uitgevoerde curriculum; en (3) het waargenomen curriculum. Het onderscheid tussen deze drie representaties werd gebruikt om de ontworpen lessen in twee klassen opnieuw te beschouwen en te reviseren, en om het theoretische raamwerk aan te passen en te verfijnen.

TREFWOORDEN: leergemeenschappen, onderwijsontwerp, schrijven, voorbereidend beroepsonderwijs, ontwerpexperiment

### Greek

[Translation by Panatoya Papoulia Tzelepi]

Τίτλος: Αξιολογώντας την αντίληψη για τις μαθησιακές κοινότητες στο αναλυτικό πρόγραμμα της μητρικής γλώσσας. Μια μελέτη σχεδιασμού

Περίληψη: Από τη διάσκεψη της Λισαβόνας(2000) η ελάττωση του αριθμού των παιδιών που εγκαταλείπουν το σχολείο έχει υψηλή προτεραιότητα στην Ευρώπη, ιδιαίτερα στην προεπαγγελματική φάση και στη δευτεροβάθμια εκπαίδευση. Ένα στοιχείο εκπαιδευτικής πολιτικής είναι η βελτίωση της αντιστοιχίας μεταξύ της προεπαγγελματικής δευτεροβάθμιας και της ανώτερης επαγγελματικής εκπαίδευσης, που επιτρέπει μεγαλύτερη εστίαση στην επαγγελματική εκπαίδευση. Ως εκ τούτου, όλο και περισσότερα σχολεία δευτεροβάθμιας προεπαγγελματικής εκπαίδευσης παρουσιάζουν ειδική πολιτική για τη γλώσσα που συσχετίζει το γλωσσικό αναλυτικό πρόγραμμα με το επαγγελματικό αναλυτικό πρόγραμμα. Αναμένεται ότι οι μαθητές θα έχουν μεγαλύτερα κίνητρα στο γλωσσικό μάθημα, όταν ασχολούνται, μέσα σε ένα πλούσια διαμορφωμένο περιβάλλον, με πλήρεις νοήματος γλωσσικές δραστηριότητες, τις οποίες αντιλαμβάνονται ως σχετικές με τα ενδιαφέροντά τους, καθώς αυτές εξυπηρετούν καθαρά επικοινωνιακούς σκοπούς. Για να καθοδηγηθεί αυτή η διαδικασία της συνένωσης του αναλυτικού προγράμματος παρουσιάζουμε μια θεωρία διδασκαλίας της γλώσσας στο πλαίσιο της προεπαγγελματικής εκπαίδευσης. Σε αυτό το άρθρο παρουσιάζουμε τέσσερις παραμέτρους σχεδιασμού που συνιστούν τη δική μας ερμηνεία της μαθησιακής κοινότητας για τη μάθηση της γλώσσας στο προεπαγγελματικό επίπεδο της δευτεροβάθμιας εκπαίδευσης. 1) Γλωσσική μάθηση ως δραστηριότητα με νόημα, 2) Γλωσσική μάθηση ως αναστοχαστική δραστηριότητα, 3) Γλωσσική μάθηση ως κοινή-μοιρασμένη δραστηριότητα, 4) Γλωσσική μάθηση ως εστίαση σε μαθησιακά μεταφερόμενα

αποτελέσματα. Για να ελέγξουμε την πρακτική και θεωρητική του αξία, σχεδιάσαμε ένα πείραμα ως συνεργασία δασκάλων και ερευνητών, στο οποίο αυτές οι παράμετροι καθοδηγούσαν την κοινή προσπάθεια. Αντιμετωπίσαμε το θεωρητικό πλαίσιο με την ανάλυση μιας μελέτης περίπτωσης, το πείραμα του σχεδιασμού, για να επεξεργαστούμε και να αξιολογήσουμε αυτό το σύνολο των τεσσάρων παραμέτρων. Επομένως λειτουργήσαμε σε τρεις αναπαραστάσεις του Αναλυτικού Προγράμματος: 1) Το επιδιωκόμενο ΑΠ, 2) Το εφαρμοσμένο ΑΠ, 3) Ο τρόπος που γίνεται αντιληπτό το ΑΠ. Το ξεχώρισμα των αναπαραστάσεων του ΑΠ χρησίμευσε στην αναθεώρηση του σχεδιασμού των μαθημάτων καθώς τα διδάσκαμε σε δύο τάξεις καθώς και στην προσαρμογή και εκτέλεση του θεωρητικού πλαισίου. Λέξεις κλειδιά: Μαθησιακές κοινότητες, διδακτικός σχεδιασμός, γραφή, προεπαγγελματική εκπαίδευση, έρευνα σχεδιασμού.

### Italian

[Translation Manuela Delfino, Francesco Caviglia]

TITOLO. La validazione del concetto di “comunità dei discenti” nel curricolo di L1: uno studio basato su progettazione

SINTESI. A partire dal Vertice di Lisbona del 2000, ridurre i tassi di abbandono scolastico è una priorità in Europa, in particolare nei percorsi di scuola secondaria che precedono l'istruzione professionale. Uno degli obiettivi è migliorare il collegamento tra scuola secondaria pre-professionale e istruzione secondaria superiore professionale, in modo da consentire una maggiore attenzione per il lavoro pratico nella formazione professionale. Di conseguenza, nei Paesi Bassi, un numero sempre maggiore di scuole per la formazione secondaria pre-professionale ha adottato una politica per l'educazione linguistica che collega il curriculum di lingua e letteratura con il curriculum professionalizzante. L'ipotesi è che gli studenti siano più motivati nelle lezioni di lingua se coinvolti in contesti ricchi, vale a dire in attività linguistiche significative che gli studenti percepiscono come rilevanti, in quanto il linguaggio serve a un chiaro intento comunicativo.

Per guidare questo processo di integrazione di curricoli abbiamo sviluppato una teoria relativa all'istruzione nell'area dell'educazione linguistica nella formazione pre-professionale. Questo articolo presenta quattro parametri per la progettazione di corsi che costituiscono la nostra interpretazione di una comunità di discenti di L1 nell'istruzione secondaria pre-professionale: 1) l'apprendimento linguistico come attività significativa, 2) l'apprendimento linguistico come attività riflessiva, 3) l'apprendimento linguistico come attività condivisa e 4) l'apprendimento linguistico finalizzato a apprendimenti trasferibili.

Per esplorare il valore pratico e teorico della nostra idea, abbiamo organizzato uno 'studio basato su progettazione' come impresa collaborativa di docenti e ricercatori, guidata da questi parametri. Abbiamo messo a confronto il quadro teorico con l'analisi di un singolo studio di caso, lo 'studio basato su progettazione', per elaborare e validare questo insieme di parametri. A questo scopo abbiamo lavorato a tre rappresentazioni del curricolo: quello (1) desiderato; quello (2) realizzato; e quello (3) percepito. Distinguere queste tre dimensioni ha consentito di rivedere e modificare le lezioni progettate, proposte a due classi parallele, come pure di correggere e perfezionare il quadro concettuale.

PAROLE CHIAVE: comunità di apprendimento, progettazione didattica, scrittura, formazione pre-professionale, studio basato su progettazione.

### Polish

[Translation Elżbieta Awramiuk]

TITUŁ. Walidacja pojęcia wspólnot uczniowskich w programie nauczania języka ojczystego: studium projektu

STRESZCZENIE. Od szczytu w Lizbonie w 2000 roku wysoki priorytet w Europie uzyskała redukcja liczby uczniów z niepowodzeniami szkolnymi, szczególnie w kształceniu przedzawodowym na poziomie ponadgimnazjalnym. Jednym z zadań jest poprawa relacji między kształceniem przedzawodowym i zawodowym dorosłych oraz silniejsza koncentracja na praktyce w kształceniu zawodowym. Z tego powodu coraz więcej szkół przedzawodowych w Holandii rozpoczęło szczególną politykę kształcenia językowego, polegającą na odnoszeniu programu nauk humanistycznych do programu kształcenia zawodowego. Jeden z programów zakłada, że uczniowie będą lepiej zmotywowani na lekcjach

językowych, jeśli zostaną zaangażowani w bogaty kontekst, w znaczące językowe aktywności, które uznają za istotne, ponieważ mają jasny cel komunikacyjny.

Aby kierować procesem integracji programów, opracowaliśmy praktyczną teorię kształcenia językowego w edukacji przedzawodowej. W niniejszym artykule prezentujemy cztery projektowe parametry, które składają się na naszą interpretację wspólnoty uczących się w języku ojczystym na poziomie przedzawodowym: 1) uczenie się języka jako działanie znaczące; 2) uczenie się języka jako działanie refleksyjne; 3) uczenie się języka jako działanie wspólne i 4) uczenie się języka jako skupienie na możliwych do przeniesienia efektach uczenia się. Żeby zbadać funkcjonalność i teoretyczną wartość, zaprojektowaliśmy jako wspólne przedsięwzięcie nauczycieli i badaczy eksperyment, który opierał się na tych parametrach. Skonfrontowaliśmy teoretyczne ramy z analizą pojedynczego studium przypadku, zaprojektowanego eksperymentu, by szczegółowo omówić i uzasadnić zestaw czterech parametrów projektu. W tym celu operowaliśmy trzema reprezentacjami programu: programem (1) planowanym; (2) realizowanym i (3) postrzeganym. Wydzielenie tych trzech reprezentacji posłużyło jako informacja do zrecenzowania i zrewidowania projektowanych lekcji, które prowadziliśmy w dwóch klasach, a także do poprawienia i udoskonalenia podbudowy teoretycznej.

SŁOWA-KLUCZE: wspólnota uczących się, projekt kształcenia, pisanie, edukacja przedzawodowa, badania projektowe

### Spanish

[Translation Isabel Martínez-Alvarez]

TÍTULO. Validando las comunidades del concepto de aprendiz en el currículo de L1. Diseño de un estudio.

RESUMEN. Desde la cumbre de Lisboa en 2000, reducir los índices de marginación en los colegios tiene una alta prioridad en Europa, especialmente en carreras pre-vocacionales en educación secundaria. Una cuestión política es mejorar el ajuste entre la educación secundaria pre-vocacional y la vocacional superior y permitir un foco más fuerte en el trabajo práctico en educación vocacional. Así, más y más colegios para educación secundaria pre-vocacional en los Países Bajos se proponen una política de educación específica del lenguaje relacionando el currículo de lengua y literatura y el currículo vocacional. Uno asume que los estudiantes estarán más motivados por las clases de lengua cuando están inmersos en contextos ricos, en actividades significativas de lengua las cuales se viven como relevantes, puesto que atienden a un claro propósito comunicativo.

Para guiar este proceso de integración currículo proponemos una teoría instruccional para la enseñanza de la lengua en contextos de educación pre-vocacional. En este trabajo presentamos los parámetros del diseño de cuatro cursos que constituyen nuestra interpretación de una comunidad de aprendices para el aprendizaje de L1 en secundaria pre-vocacional: 1) aprendizaje de la lengua como una actividad significativa; 2) aprendizaje de la lengua como una actividad reflexiva; 3) aprendizaje de la lengua como una actividad compartida y 4) aprendizaje de la lengua como un foco de resultados en aprendizaje transferibles. Para explorar la utilidad y el valor teórico, establecimos un diseño experimental como una iniciativa de profesores e investigadores, en la cual estos parámetros guiaron la iniciativa conjunta. Confrontamos el marco teórico con el análisis de un único estudio de caso, el diseño del experimento, para elaborar y validar esta serie de cuatro parámetros de diseño. De este modo, operamos en tres representaciones del currículo: la (1) intencionada; (2) implementada; y (3) currículo percibido. La discriminación de estas tres representaciones sirvió como datos para reexaminar y revisar las lecciones diseñadas cuando las ejecutamos en dos clases, así como para ajustar y perfeccionar el marco conceptual.

PALABRAS CLAVE: comunidades de aprendizaje, diseño instruccional, escritura, educación pre-vocacional, educación, diseño de investigación

### Turkish

[Translation Burak Sunguralp Tekin]

BAŞLIK. İlk dil Müfredatında öğrenci toplulukları kavramını geçerli kılma

ÖZET. 2000'deki Lizbon Zirve'sinden beri Avrupa'da orta öğretimde özellikle meslek öncesi eğitimde okuldan terk oranlarını düşürmek başlıca bir öncelikti. Bu konuda, meslek öncesi orta öğretim ile temel mesleki orta öğretim arasındaki uyumu artırmak ve mesleki eğitimde uygulamaya daha fazla ağırlık

vermek bir plandır. Bu yüzden, Hollanda'da meslek öncesi orta öğretim için mesleki müfredatı dil sanatları müfredatı ile ilişkilendirerek özel bir dil eğitimi politikası düzenleyen okulların sayısı gittikçe artmaktadır. Öğrencilerin iletişimsel amaçlara hizmet eden zengin bağlamlar ve anlamlı dil aktiviteleri ile meşgul olduklarında dil derslerine daha fazla motive olacaklarını farz etmektedirler. Meslek öncesi eğitim ortamında dil eğitimi için, bu müfredat entegrasyonu sürecine rehberlik etmesi adına, bir eğitim teorisi düzenliyoruz. Bu çalışmada, meslek öncesi orta öğretim ilk dil öğrenimde bizim öğrenci topluluğu yorumumuzu oluşturacak dört ders dizayn parametresini sunuyoruz: 1) anlamlı bir aktivite olarak dil öğrenme; 2) reflektif bir aktivite olarak dil öğrenme; 3) ortak bir aktivite olarak dil öğrenme; 4) transfer edilebilir öğrenme sonuçlarının bir odağı olarak dil öğrenme. Kullanışlılığı ve teorik değeri kontrol etmek için öğretmenlerin ve araştırmacıların işbirlikçi girişimi olarak bir deney tasarımı oluşturduk ki burada bu parametreler ortak girişimi yönlendirmiştir. Bu dört dizayn parametresini geçerli kılmak için, teorik yapıyı bir durum çalışmasının analizi ile karşılaştırdık. Bu sebepten, üç müfredat temsili kullandık: (1) planlanan ve istenilen; (2) uygulanan; (3) hissedilen ve algılanan müfredat. Bu üç temsili ayırt etme kavramsal çerçeveyi belirlemenin ve onu düzeltmenin yanı sıra iki sınıfta kullandığımız dersleri gözden geçirmek için de veri işlevi gördü.

ANAHTAR KELİMELEER: Öğrenme toplulukları, öğretim tasarımı, yazma, meslek öncesi eğitim, araştırma tasarımı

## 1. INTRODUCTION

The Netherlands operates quite a strongly stratified educational system from the moment students leave primary school at the age of 12. Then students are assigned to pre-vocational (4 years) or general education (5 to 6 years). Up to about 60% of all students enter the pre- vocational system. This pre-vocational system itself is again a highly streamed system. They place students into one out of four tracks, according to the student's cognitive level. The tracks vary from the more cognitive oriented track to the most basic vocational track. The dropout rate is the highest in this basic vocational track: the risk of dropout is roughly three times the average. Of those students who began in this track, no fewer than 17% have already left school in their fourth year (Herweijer, 2008, p. 175).

After pre-vocational education, students, then about 16 to 17 years old, continue in middle secondary vocational education (qualifications varying from 1 to 4 years) in various vocational domains. To prepare students to choose the track that fits them best in middle secondary vocational education, pre-vocational education aims at offering students a vocational orientation in the second two year cycle of the four year track. In this cycle, half of the learning time in a week is devoted to the vocational program, so that students can start acquiring vocational experiences in real and simulated workplaces. The other half is devoted to academic subjects, such as the subject 'Dutch language', for three units of 50 minutes a week.

The vocational sub curriculum has been the object of curriculum renewals since 2000 to pay more attention to vocational orientation. Students are now sent to workplaces outside school (daycare, hair salon, etc) and participate in simulated workplaces in the school to get some feeling for working in a particular area (Boersma, ten Dam, Volman & Wardekker, 2009). The academic subjects, on the contrary, are still taught – generally spoken – in a rather theoretical way. The content of these subjects is often 'undefined', de-contextualized, and unconnected to students' vocational orientation (Oostdam & Rijlaarsdam, 1995). Learning is text book driven,

writing tasks are textbook tasks, with little more instruction than some ‘tips’: how to interview, how to start a report. Most tasks have to be completed individually.

In this national context we set up a series of studies in instructional design for language lessons in pre-vocational education to validate and adjust an instructional theory for language education. The present study is situated in the two most basic levels of pre-vocational secondary education, catering for the cognitively less advantaged students, in the work domain of Care and Welfare. Together with vocational teachers and language teachers from the same school, we iteratively designed instructional units and tested them in practice. We based the design process on a conceptual framework that entails four design parameters. The data of this first iteration is one instructional unit that practitioners and researchers collaboratively designed, implemented, and evaluated. Our aim is to explore the validity of the four design parameters for practice and use the experiences from practice to revise and redefine the conceptual framework.

## 2. THEORETICAL BACKGROUND

Following Kelly (2006), we combine a theory of social learning with a domain specific learning theory to set up an explicit conceptual framework. From social learning theory we borrow the concepts of ‘community of learners’ (Brown, 1992, 1994, 1997; Brown & Campione, 1994, 1996; Campione, Shapiro, & Brown, 1995) and ‘community of practice’ (Wenger, 1998). From L1-language learning theories we build upon the well-established fundamentals of Moffett’s L1-learning theory (Moffett, 1968), adding and weaving in two more recent language learning models: the model for language processing and learning (Oostdam & Rijlaarsdam, 1995), and student-as-learner participation model in the L1-curriculum (Rijlaarsdam & Van den Bergh, 2005). Moreover, we will elaborate on Wells’ distinction between language as a school subject and as a means to learn collaboratively or dialogically (Wells, 2000). Schools are well aware of the gap between the vocational and the general curriculum. Now that schools experienced the relative success of the curriculum renewal for the vocational curriculum, they started to set out a specific language policy to relate language lessons to the vocational curriculum. The overall aim is to motivate students for the lessons by engaging them in richer contexts, in meaningful language activities, which they experience as relevant, with a clear purpose. Students must experience authentic language activities that will enable them to apply what they are learning to their lives outside of the classroom and school (Brophy, 1999; 2008). This language education policy calls for situational curricula designs and for language teachers competent in designing such lessons. The central question for teacher-designers is how to plan instruction that responds to individual interest, creates situational interest, and therefore increases learning (Krapp, 2007; Hidi & Renninger, 2006; Bergin, 1999). It is quite a challenge to implement these innovations within the prevailing culture of textbook driven language learning. A survey indi-

cates that only 25% of schools relate the language lessons to the vocational curriculum, in various ways and degrees (Bonset, Ebbers, & Malherbes, 2006).

### *2.1 Social learning theory*

Brown and Campione started their research in the laboratory. From there they moved into real classroom settings aiming at building theory about the concept of 'community of learners' in these naturalistic settings. From this theory we adopted three main educational principles. The first principle is guided discovery. In cooperation with the teacher and/or other experts, students generate and test their own ideas and knowledge. Learners are active, self-conscious and self-directed constructors of knowledge (Brown & Campione, 1994; 1996). The second principle is shared discourse (Brown & Campione, 1994; 1996). The underlying tenet is the dialogic nature of learning (Wells, 1999). Participant structures in school, group work or teacher-led classroom discussions are dialogic in intention. Specific forms of collaborative learning such as the jigsaw method (a cooperative learning activity that assigns each student a subtopic on the area of study) or reciprocal teaching (a method of enhancing reading comprehension) lead to shared discourse in the community. Central to these collaborative learning activities is the display of distributed expertise, that is, responsible members of the community share the expertise they have or take responsibility for finding out about needed knowledge. Students negotiate meaning, generate and appropriate ideas within the community, with teachers and other experts. The third principle is real content, extending the community of learners beyond the classroom walls (Brown & Campione, 1994; 1996), to link school activities with outside school activities, to relate current practice at school and expert practice outside school.

As Brown and Campione, Wenger (1998) perceives the 'community' as a 'privileged locus for the creation of knowledge' (p. 214). Whereas community of learners explicitly refers to a school-context, a community of practice does not. Wenger's social learning theory is based on extensive investigations of a variety of communities of practices (e.g. past and present cultures, occupations, and other social contexts). He identified four components of learning: meaning, practice, community, and identity, which form together the concept of 'learning': learning as experience (meaning), learning as doing (practice), learning as belonging (community) and learning as becoming (identity). These four components are 'deeply interconnected and mutually defining' (p.5) and are depicted around the legitimate peripheral participation of newcomers in that particular community. Newcomers will gradually move towards the centre as professional participants in that community.

Brown's, Campione's and Wenger's concepts of community meet when school-contexts and out-of-school-context boundaries between the two communities are permutable, especially when one of the educational aims is that students grow into the community of practice, as a first step to explore vocational identity when they orient themselves on the world of work and labor. Then, learning activities within the 'community of learners' are strongly aimed at students' peripheral participation

in the ‘community of practices’ (Boersma, ten Dam, Volman & Wardekker, 2009). Campione, Shapiro and Brown (1995) underline that students should be made aware that the concepts and processes they are introduced to at school are generative and useful across many settings, inside school as well as outside school, at present and in the future.

## 2.2 *Learning theory for language lessons*

Moffett (1968) was one of the first researchers who presented a complete L1-learning theory. In his theory the super-structure of language (in his case: English) lies in the “trinity of discourse”, that is ‘somebody-talking-to-somebody-about-something’. Moffett advocated a naturalistic, holistic and functional approach to language learning: “The referential relation of I-it must be crossed with the rhetorical relation of I-you, in order to produce a whole authentic discourse.” (p. 31).

Learners must experience whole, authentic discourse to undergo and analyze what communication actually does. In his view, learning ensues from experiencing language and from abstracting and generalizing from that experience. Abstracting and generalizing are the basic learning activities in L1-education for Moffett. To address the communicative aspects adequately, students must learn to anticipate on their audience in the discourse which requires abstraction and generalization from the context of the sender to the context of the other. That is, communicating something means to transform data (I-it relation) to fit in the addressees’ world (I-you-relation) by analyzing the world. To address the informative aspects properly, students should learn to extract proper concepts and ideas – to abstract and generalize – from raw phenomena during the discourse.

Oostdam and Rijlaarsdam (1995) elaborate the communicative aspects in their “Model for language processing and learning”. They distinguish two categories of learning tasks in the language classroom: language processing tasks (LPT) and language learning tasks (LLT). The main goal of an LPT is to communicate, and it primarily applies to students’ pragmatic and socio/cultural competences. This happens when students are involved in doing language, when they communicate within a certain framework of communicative aims and setting. The main goal of an LTT is to learn how to communicate, and it primarily applies to students’ strategic competence, fed by generalization and abstraction. In principle the two tasks must be connected: it is the communicative experiences from which students must learn. When participating in whole language tasks, students somehow experience communicative problems and effects within the discourse, which may raise awareness of how to communicate and how to learn to communicate (Rijlaarsdam & Couzijn, 2000).

How this awareness raising can be stimulated in language classes is further theorized in the “Student-as-learner participation model in the L1-curriculum” (Rijlaarsdam, et al, 2008; Rijlaarsdam & Van den Bergh, 2005). This model relates the two types of tasks mentioned above with roles L1-learners have in the L1-classroom: language users (producing and receiving) and language learners. As Moffett (1968)

pleaded, in language classes authentic communication must be established. Real writing and speaking requires real readers and listeners. In the role of communicator, students “participate in communication”. As writers/speakers, they must experience how their texts affect readers and listeners; as readers/listeners, they must experience texts and formulate their responses” (Rijlaarsdam & Van den Bergh, 2005, p. 6). This means that writing and reading, and speaking and listening must be connected. In the role of learner, students “observe and evaluate relevant processes: writing processes (strategies), text processing processes (reading), or communication processes between writers and readers (talking about, for example, texts and interpretations)” (Rijlaarsdam et al., 2008, p. 58). What this model contributes to Moffett’s theory is that the role of the learner is more elaborated and that the two functions – communicating and learning – are placed in separate roles. This implies that students may learn from observing communication instead of being involved in communication themselves. The act of communication can be so cognitively and affectively demanding that almost no room is left for learning. When in language classrooms communicative tasks are set, students as a group of communicators create their own learning environment in parallel learning tasks: they create data (‘doing language’) to learn from.

The interesting complexity of the language curriculum is the double focus: language use is subject of study as well as the medium in which the learning and teaching is actually carried out (Wells, 2000). As soon as students fulfill the role of learners, they use language to inquire, participate, collaborate, construct and understand. This is to be seen as a second order authentic communicative situation. Moffett (1968) already claimed group discussion in the classroom as the fundamental activity for learning. He called dialogue, verbal and cognitive collaboration between students, the mayor means for developing thought and language and the act of abstraction and generalization.

In summary, in an L1 classroom, learners are writers/speakers and readers/listeners with real or simulated purposes: they must experience the communicative power of language. This requires that teacher-designers must create ‘real tasks’ form which they can experience the effect on receivers (LPT-tasks). These experiences must be object of study or reflection to stimulate learning (LLT-tasks, students moving from language users to language learners). When learners talk with each other about their communicative experiences or their observations of others who communicated, they create a genuine communicative dialogue.

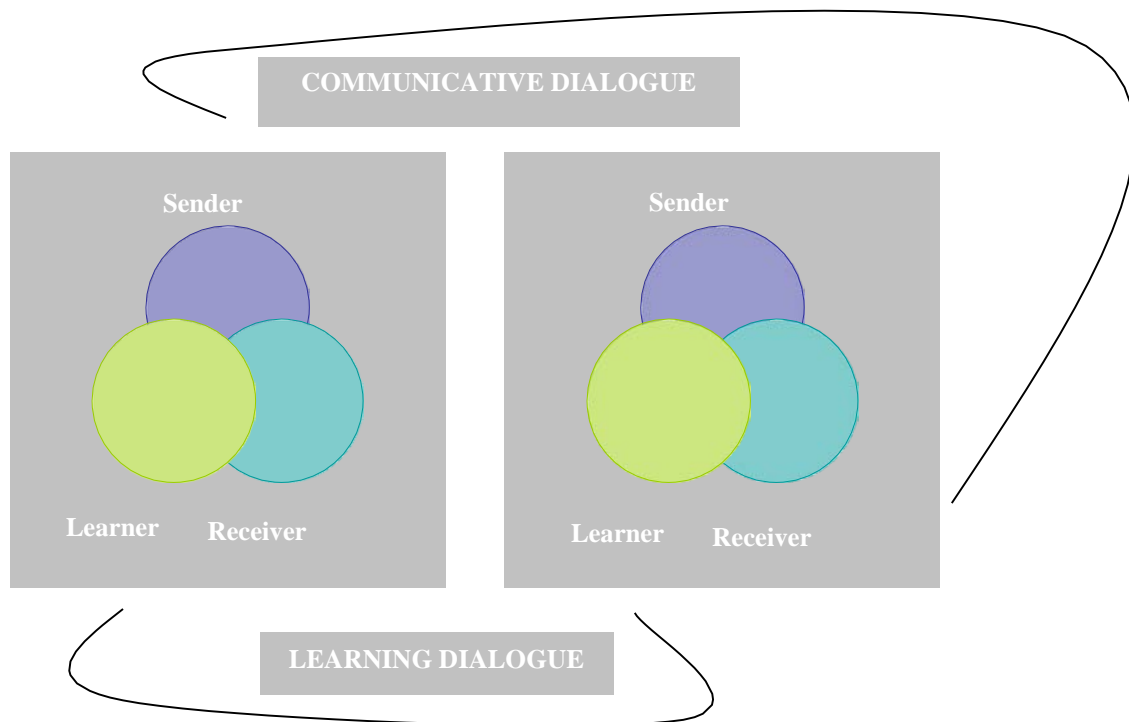


Figure 1. Roles within learners, connected to other learners to create communicative dialogues (communicative experiences: doing language) and learning dialogues (doing metalinguistic work).

### 2.3 Designing Communities of Learners in L1-Education

From the literature outlined in the previous section, we distilled four parameters for designing L1-learning activities in pre-vocational secondary education. Together they constitute a conceptual framework of a community of learners in L1-education; a starting point for an instructional theory for language education for this segment of education. We call them design parameters, as they form the guidelines for designing and evaluating learning activities (see Table 1).

Table 1: L1-Instruction Design Parameters

L1-learning is.....and therefore one must	
<i>meaningful</i>	create authentic communication
<i>reflective</i>	create relevant learning activities – analyzing, abstracting and general-

<i>shared</i>	izing;
aiming at on	create dialogues, in communicative and in learning roles
<i>transferable out-</i>	create opportunities to abstract from the specific context and to gener-
<i>comes</i>	alize to other contexts.

---

### 2.3.1 *Language Learning as a Meaningful Activity*

The design parameter ‘L1 learning should be a meaningful activity for students’ has its roots in the principle that learning is a contextualized and situated activity: learning activities are practiced in the context of their intended use (Brown & Campione, 1996). In line with Moffett (1968), “we must create more realistic communication “dramas” in which the student can practice being a first (sender) and second person (receiver) with better motivation and in a way more resembling how he will have to read, write, speak and listen in the “afterlife” (p. 12). From a language learning perspective this means that students actively participate as language users in these authentic and realistic contexts (target and training, outside and inside school), which Oostdam and Rijlaarsdam (1995) call Language Processing Tasks (LPT). Students’ learning ensues from participating and experiencing communication.

Furthermore, this situated and contextualized perspective has implications for the subject matter content. This implies prioritizing the pragma-linguistic and socio-cultural aspects of language use, more than syntax and grammar. It implies emphasis on the dynamics of language use and communication, on the creation of meaning between and in the communication partners. The topic of discourse should also be carefully chosen, depending on the authentic communicative contexts, real audiences and students’ interest. Overall, activities that correspond with students’ individual interest will sooner result in situational interest. That is, students are likely to show and maintain interest in activities if the purpose of the target-task is meaningful, clear and transparent to them (utility-goal relevance) (Bergin, 1999).

### 2.3.2 *Language Learning as a Reflective Activity*

That language learning should be reflective activity has its roots in the principle that learning is a constructive activity: language learners are active, self-conscious, and self-directed constructors of knowledge rather than passive recipients of others’ expertise (Moffett, 1968; Brown & Campione, 1996). From a language learning perspective this means that students learn how to communicate by abstracting and generalizing from whole and realistic communication, being involved in Language Learning Tasks, (LLT) as Oostdam & Rijlaarsdam (1995) called them, to become aware of strategies that work and that they (can) use as language users and language learners.

Here the strategic competence is emphasized. A relevant topic of discourse in language education is then the strategic nature of language learning itself (e.g. ‘which strategies to apply in the target-communicative setting?’, ‘how does the au-

dience influence the communicative aspects and informative aspects of the discourse?'). Reflective activities like analyzing, abstracting and generalizing may contribute to the quality of the strategic component of language processing and language learning.

Overall, the development of students' communicative competences (pragmatic and strategic) and students' interest in learning do mutually interrelate and influence each other. In the process of meaning making and problem solving, an emerging interest leads a student to consider both the context and the content of the task.

### 2.3.3 *Language Learning as a Shared Activity*

The underlying tenet of shared learning lies in the principle that communicating and learning (to communicate) are social activities. Therefore, meaningful and reflective learning activities are activities which call for an instructional setting in which students collaborate and share. Collaborative instructional formats for meaningful learning activities support the development of communicative skills (speaking, listening, writing and reading) and the development of critical thinking skills. In the first (communicative skills) communication is considered as an educational goal in itself. In the latter (critical thinking skills), communication is considered as a means for learning.

Inspired by the "Student-as-learner participation model in the L1-curriculum" (Rijlaarsdam & Van den Bergh, 2005; Rijlaarsdam et al., 2008) shared activities link up with the different educational goals and different roles or functions students fulfill. Shared (learning) activities as LPT contribute to students' role as language users. Speakers need listeners and writers need readers, and vice versa. Within a community of learners, students alternate between these roles.

Shared (learning) activities in a LLT contribute to students' role as language-learners. Students observe and evaluate peers and experts being involved in communication, being involved in language (processing and learning) tasks. Together with teacher and/or other experts, they collaboratively generate, share and appropriate their knowledge and ideas within the community.

### 2.3.4 *Language Learning as a Focus on Transferable Learning Outcomes*

Transfer is the ultimate goal of L1-teaching. To elaborate our fourth parameter, we use a broad definition given by Marini and Genereux (1995, p. 2): "Broadly defined, transfer involves prior learning affecting new learning or performance. The new learning or performance can differ from original learning in terms of the tasks involved (as when students apply what they have learned on practical problems to solving a new problem), and/or the context involved (as when students apply their classroom learning to performing tasks at home or work)" (1995, p. 2).

From a language learning perspective Oostdam and Rijlaarsdam (1995) stress the importance of the distinction between 'transfer affecting new learning' affecting the

strategic competence, and 'transfer affecting new performance' affecting the pragmatic-linguistic competence. Their distinction in functions between LPT and LLT link up with the distinction between 'transfer affecting new learning' and 'transfer affecting new performance'. Transfer affecting new performance calls for LPT, in which students learn to communicate within the context/task. Transfer affecting new learning asks for LLT, in which students learn to reflect on communication processes and products, and abstract and generalize from whole and realistic communication. Another relevant distinction in a naturalistic, holistic and functional approach in L1-education is between task-transfer and context-transfer. Designers should organize learning- contexts in such a way that students would indeed perceive learning and transfer contexts as sufficiently similar, so performance in the target context results in applying their pragmatic and strategic competences, experienced and learned in the training context. Transfer of tasks relates to reflective learning activities within the community of learners. The key assumption here is that to apply pragmatic and strategic competences in the target context, students should truly understand this context. This is in line with Campione, Shapiro and Brown (1995, p. 39) who define transfer in its core as "understanding": if students understand a variety of domain-specific concepts and the more general strategies behind these concepts, they can talk knowingly about them (reflective access) and use them in a flexible way (multiple access). Therefore designers should plan activities that support students' awareness-raising about their own strategies they (can) use as language users and learners.

With respect to developing interest it is essential that teacher designs the learning units in such a way, that students can come to value certain communicative processing tasks, communicative contexts, target groups, etc., and language learning tasks. Engagement in these tasks enables students to deepen their knowledge and strategy use. In this way, students become steadily more autonomous language users and learners in personal, educational and vocational domains.

Research aim and research questions

The purpose of this study is to explore the validity of the four parameters that constitute our conceptual framework of a community of learners for L1-learning, as outlined in the previous section. Therefore we tested this conceptual framework by setting up a design experiment in close collaboration with teachers. The whole process of designing, implementing and evaluating activities in the experiment was guided by the four parameters. We will describe the process of students' learning and the means that were designed to support that learning. Data from this design experiment can help us to improve the conceptual framework the design parameters constitute. We will address three research questions:

The four design parameters were set to create engagement and involvement of students in language lessons. Therefore our main research question is whether the four design parameters support students' learning and active participation. Did the lessons do what they were supposed to do?

Before we can answer this question, we must be sure that the designed lessons and the actual realized lessons indeed represent the four design parameters, as both the designed as the actual lessons are instantiations of the theoretical concept. The

research question we will address first is then: Are all four parameters represented in the lesson designs and the actual lessons, and to what extent are these instantiations valid representations of the parameters?

The last question serves the theoretical aim we set: from the design experiment, the design process, the actual lessons, we aim to get more grip on the conceptual framework for effective L1-lessons in prevocational education. That is, we expect that the experiences with these four design parameters will result in a more precise definition of the parameters, and in a clearer insight in the interrelationship of these parameters. The guiding research question is: What did the process of designing, implementing and evaluating reveal about the content of the parameters and the interrelations?

Following Brown and Campione (1996), Collins, Joseph and Bielaczyc (2004) state that the enacted design is often quite different from what the designers intended. To answer these two research questions it is important to acknowledge that the four design parameters underlying the design experiment could be affected (positively, negatively) by the way the design was implemented and/or perceived. Therefore we operate three curriculum representations (Goodlad, 1979): 1) intended curriculum; 2) implemented curriculum and 3) perceived curriculum). In return, analyzing tensions between these three representations may help us to revise the design, and revise our conceptual framework.

### 3. METHOD

#### 3.1 *Participants*

##### School

The participating pre-vocational school is situated in a small town in the North-West of The Netherlands. About 1000 students and 80 teachers study and work at this school. For a more detailed picture of the setting of the school it is relevant to explain the organization of the whole curriculum. Students in grade seven and eight all follow the same general curriculum, called basic education. In the ninth and tenth grade the curriculum is divided into two sub curricula: vocation-oriented and general program. Students may choose one out of three vocational tracks (Engineering & Technology, Care & Welfare or Business). The vocational program takes about fifteen out of 30 hours a week. The general program requires the same number of hours; the subject of L1 is one of the common and compulsory subjects for all students (three lessons a week).

Within national boundaries (key-aims, central exams), the L1-departement realizes a school specific L1-curriculum. Most lessons are dominated by the textbook. Students work in a period of six weeks, then they do a test, in most cases provided by the textbook publisher. Most frequently, in L1 classrooms students from the three vocational domains are grouped together, which makes it problematic to adjust the lesson contents to their vocational sector.

Our study is conducted in the ninth grade in the two lowest levels in the vocational domain of Care & Welfare. For this particular study, researchers asked the school management to group students in the participated L1 classes as much as possible according to their chosen vocational domain so that co-operation between vocational and language teachers would be possible.

#### Teacher

In this paper we analyze the cooperation with a female teacher, then 46 years old. She started her carrier as a primary school teacher in 'Montessori' education. Now she is a L1- teacher in pre-vocational secondary education for more than 12 years. Besides being a language teacher, she also acts as the student's counselor for students with special needs (learning and emotional problems).

#### Students

In this study 21 students participated, 19 girls and 2 boys. The participating students were about fifteen years old ninth-grade students in the domain of Care & Welfare. We followed four students in particular by videoing all classroom activities in which they participated. Before the intervention the teacher qualified this group of four as the most motivated group.

#### Researcher

The first author of this paper participated as researcher. She is enrolled in the design research as a PhD-candidate. During her studies (Master in Arts, Applied Linguistics), she worked as a teacher in the discipline 'Dutch as a second foreign language'. After her studies she was appointed for three years as an educational advisor in secondary and senior vocational education with a focus on L1 and L2 teaching and learning.

## 4. DATA COLLECTION

This study concerns one single case study as outlined by Yin (2003). The case is a designed case (Reigeluth & Frick, 1999): An instructional unit in which teacher and researcher attempted to manifest the four design parameters as described in the section 3. According to Yin, in a one single case study it is critical to apply a mixed-methodology and to collect data from different sources due to the need of converging evidence. We collected data about the three curriculum representations as distinguished by Goodlad (1979) in three corresponding stages of the process; 1) designing, 2) implementing and 3) evaluating.

Table 1 shows all data sources collected during the three designing phases corresponding with the three different curriculum representations. In the following section we will clarify table 1 in more detail describing the collaborative activities teacher and researcher undertook to collect data about the three curriculum representations in the three corresponding stages

Table 2: Data sources

Phases	Curriculum representations	Data
Designing	Intended	Start Interview transcript End interview transcript Field notes of 5 design sessions Designed Learning materials Email correspondence
Implementing	Implemented	Video recordings (four students at work (camera on stand), Classroom field notes (researcher) Copies of all students' written work. Time on task observation data.
Evaluating	Perceived	Transcripts interviews with teacher (2x) Transcripts interview with student group.

#### 4.1 Designing the instructional unit; gathering data about the intended curriculum

Before the design sessions the researcher conducted a semi-structured interview with the teacher to explore to what extent she had already shaped her educational practice towards the four design parameters. The interview also served as the main starting point for developing a shared discourse between researcher and teacher. Then, during five design sessions of four hours each, we designed the first instructional unit. The researcher “stimulated the teacher to provide input, kept track of the goals, provided alternative views on how to engage students, worked with the teacher as a critical friend” (observation of colleague researcher who worked with the management and attended several design and evaluation sessions). The significant endpoint was to contribute to students’ vocational identity by means of communication with a vocational target group (in this case, elderly people). The anticipating starting points were the four design principles. After the fifth session, just before the implementation, the researcher interviewed the teacher again to ask her to envision the learning route and the means of support in terms of the four design parameters.

#### 4.2 Implementing the instructional unit; gathering data about the implemented curriculum

The teacher and her students carried out the instructional unit in five regular Dutch lessons of 50 minutes each, and three hours in which students met the elderly people. Data about the implemented curriculum encompassed (a) video recordings of

the four students at work (camera on stand), (b) classroom field notes made by researcher, (c) copies of all students' written work. In addition, a trained observer attended all lessons. She randomly selected twelve students and observed and scored students' task behavior (on/off task), direction of communication during students' on-task behavior and the type of learning task the observation was targeted to.

#### *4.3 Evaluating the instructional unit; gathering data about the perceived curriculum*

The teacher and the researcher evaluated the instructional unit in two sessions of four hours each. In the first session the stimulated recall interview had an open character; the interviewer asked the teacher about the strong and weak points in the implemented instructional unit and possible modifications for the redesign. In the second session, the interview was structured along the four design parameters. The researcher confronted the teacher with the envisioned learning route and the means of support in terms of the four design parameters based on the second interview in the design phase (see table xx) as was done just before the implementation. The teacher was invited to react on selected video fragments that reflected the four design parameters. The researcher evaluated the instructional unit with the group of four students in depth, in two sessions of one hour each. In the first session the researcher asked open questions about the several learning activities. In the second session students reacted to selected video fragments that reflected the four design parameters.

Except for observations via classroom observation instrument, all data were gathered by the researcher herself.

## 5. ANALYSES

To understand the role of the four parameters in the design experiment, we first separately analyzed the three curriculum representations. Then we confronted the intended with the perceived curriculum. For analyzing the implemented curriculum, we mainly focused on the classroom observation data.

### *5.1 Intended and Perceived Curriculum*

For the intended and perceived curriculum we systematically analyzed the transcripts of the interviews with matrix display technique (Miles & Huberman, 1994). Analysis consists of three current flows of activities: data reduction, data display, and conclusion drawing/verification.

We created a two dimensional matrix, with the four design parameters on the horizontal axis and the six lessons on the vertical axis. Then, we placed relevant fragments from the transcripts in the matrix. The second analysis activity, data display, concerns an organized assembly of information that permits conclusion drawing and action taking. Therefore, the content of the matrix was condensed. During

this process, the researcher formulated hypotheses with regard to the four parameters of the condensed matrix. The second author of this article critically followed the processes of reduction and condensation. During the third analysis activity, conclusions were drawn based on the content of the condensed matrix. Both researchers verified the interpretations (hypothesis) and conclusions by going through the raw data (initial written accounts) once again. Evidence and support for teacher's and students' statements in the interviews were sought in the videotaped lesson, and written and audio recorded products of students. In this process, we actively looked for examples and counter-examples.

### *5.2 Implemented Curriculum*

We focused on the quantitative data gathered by means of the time on task classroom observations. Furthermore we used the field notes taken in and after each lesson to interpret the quantitative analysis of the implemented curriculum.

The unit of analysis for the time on task data was one single lesson. Data were aggregated on the level of one single lesson. For each category (students task behavior, direction of shared discourse during students' on-task behavior, task type) we calculated the mean percentage of the various sub categories by dividing the total n of the sub category by the total n of the whole category. The resulting score indicates that in most lessons students' on-task behavior turned out satisfactory, although not all of them carried out learning activities as intended.

To check the reliability of the classroom observation instrument two research assistants independently scored the same 12 students during two lessons of 50 minutes. The Pearson Correlation of the observations of the two observers varied across the sub categories from .70 to .95, with a mean of .86.

### *5.3 Triangulation*

Corresponding the need of converging evidence when analyzing one single case study, we used the analytic technique of triangulation (Yin, 2003) to seek concurrence of results across the quantitative and qualitative analysis of the different data sources. For example, we sought for meaningful relations between successful manifestations of the four parameters in the design and students positive task behavior featured by collaborative discourse.

### *5.4 Filling the gaps: Validation*

Table 2 shows the format we constructed to put forward the gaps between the three curriculum representations. We used the outcomes to analyze the modifications made in the next cycle of redesigning the instructional unit. For each design parameter, we looked for learning activities that a) were implemented and perceived as intended; b) were not intended as such but were implemented and perceived and c)

were intended as such but were not implemented and perceived. In this way we were able to understand how each of the design parameters were implemented and how well the design parameters in the implementation worked together toward the designer's goals. In addition, we tried to understand the underlying theoretical implications and to make refinements to our initial conceptual framework that was at the outset of the design experiment.

*Table 3. Three comparisons that contribute to theoretical insight: Cross table Intended en Perceived/Implemented curriculum*

		Intended	
		Yes	No
Perceived/Implemented	Yes	Validation of theory: theory and manifestations concur	Additional theoretical insight
	No	Start search for explanation: invalidation of theory and / or operationalization	

## 6. RESULTS

### *6.1 Intended curriculum described*

To integrate the L1-curriculum and the Care & Welfare curriculum, the L1-design team collaborated with the vocational teachers. The overall goal of the instructional unit was to contribute to students' vocational identity and communicative competences by meeting a relevant vocational target group. Therefore, the design teams first created an authentic and purposeful vocational target context: the Coffee Morning for which the elderly people, who lived in the elderly home in front of the school, were invited by the students and the teacher. Secondly, the L1-design team picked strands of the prescribed L1-curriculum that lent themselves well to teach and learn in relation to the elderly and the Coffee Morning. The whole class had to compose a journal about the theme 'Early Days and Nowadays'. in which students reported on the differences between these two time frames. To collect resources for the journal, students should have interviewed the elderly about the early days during the Coffee Morning. So, in the design as intended, the Coffee Morning meaningfully and purposefully connected the communicative skills of interviewing and writing an article. The Coffee Morning served two learning agenda's: learning to communicate with a relevant vocational target group and communicating for learning, as gathering

data for the article. In the three L1-lessons preceding the Coffee Morning event, students should have constructed and pre-tested their interview plans, in the two L1-lessons after the Coffee Morning event students should have used their interview data to write their articles.

### 6.2 Implemented curriculum described

Table 4 shows each of the six lessons in more detail. The first column presents a short description of each lesson in terms of concrete learning activities (intended curriculum). In the following columns the implemented curriculum is presented by means of classroom observations. For each lesson we present: the total amount of minutes observed, the percentage on-task behavior of students, the activity type (Plenary, Group or Individual) and the direction of the observed shared discourse (Student-Teacher, Student-Student, or NO interaction).

Table 4. *Intended and Implemented Curriculum: Time on task, Time in activity type (plenary, group, individual), and in type of discourse (student-teacher, student-student, undirected)*

Lesson	Sequence of the intended learning activities	Minutes observed	Student's behavior	Type of activity			Direction of discourse		
		Time	On-task	P	G	I	S↔T	S↔S	NO
1.	<i>Drafting</i> Interview Plan: generating interview themes and interview questions for the elderly people for the classroom journal in cooperation with their peers,	36	.81	.06	.94	.00	.13	.83	.04
2.	<i>Revising</i> Interview Plan: revising interview themes and the interview questions.	27	.79	.11	.89	.00	.12	.80	.08
3.	<i>Pretesting</i> Interview Plan: 1 playing a drama play in a group of three students; alternating between the roles of interviewer, interviewee and evaluator.	34	.84	.43	.57	.00	.44	.56	.00
4.	<i>Interviewing</i> the Elderly People during the Coffee Morning.								
5.	<i>Drafting</i> the article: generating content for the article by using and discussing the interview data as the main source.	31	.41	.11	.03	.86	.24	.24	.53

6.	<i>Writing and Revising the article on the computer</i>	36	.75	.04	.00	.96	.08	.08	.85
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In the following we will present the most remarkable results of the classroom observation data. It seemed that the Coffee Morning clearly worked as a breakpoint in the instructional unit. In the three lessons preceding the Coffee Morning students showed an average of 81,3 % on-task behavior. In the two lessons after the Coffee Morning students clearly scored lower, an average of 58 %. Although not observed by means of the observation instrument, according to video fragments and all participants, during the Coffee Morning itself students seriously and actively participated. Another observed difference between before and after, is the shift in 'type of activity' and 'direction of discourse'. Group activities and student-student interaction dominated the first three lessons, whereas individual activities and 'non-interaction' dominated the two last lessons.

The question now is whether the lessons were instantiations of the design parameters. Therefore, we confronted the intended and implemented curriculum from the perspective of the four design parameters. Table 5 summarizes the gaps between the intended and perceived curriculum. We describe both curricula levels in terms of concrete learning activities (columns 2 and 4) and in terms of the four design parameters (columns 3 and 5). Data summarized in table 4 obviously supports this 'breaking point'-thesis we formulated on the basis of the data in table 3. The first three lessons and the Coffee Morning itself worked out quite satisfactory, except for the second lesson. In the second lesson we had planned an activity of reflection, due to the unexpected success of the first lesson, this activity seemed needless. The last two lessons did not live up the expectations at all, neither students nor the teacher perceived the parameters as intended.

Table 5: Design parameters as intended and implemented/realized.  
 In the realized columns: black=realized and intended; grey: realized, not intended; red: realized, not intended

		Intended curriculum				Perceived curriculum			
		Design parameters				Design parameters			
		Meaning full	Reflective	Shared	Transfer	Meaning full	Reflective	Shared	Transfer
1	Drafting Interview Plan: generating interview themes and interview questions for the elderly people for the classroom journal in cooperation with their peers	■	□	■	□	■	■	■	□
2	Revising Interview Plan: revising interview themes and the interview questions	□	■	□	□	□	■	□	□
3	Pretesting Interview Plan: playing a drama play in a group of three students; alternating between the roles of interviewer, interviewee and evaluator	■	■	■	■	■	■	■	■
4	Interviewing the Elderly People during the Coffee Morning	■	□	■	■	■	□	■	■
5	Drafting the article: generating content for the article by using and discussing the interview data as the main source	■	■	■	□	■	■	■	■
6	Writing and Revising the article on the computer	■	■	■	□	■	■	■	■

## 7. MAIN LESSONS LEARNED

### Meaningful?

What is the main lesson learned concerning our first parameter ‘meaningful learning’? According to the teacher and the four students, where in the instructional unit was this parameter manifested and how did this parameter look like?

In the evaluation the teacher elaborated on the contrast between the lessons preceding the Coffee Morning event and the lessons after this event, a contrast that also was reflected in the difference in students’ engagement in the implemented curriculum in the first and third lessons (average of 81,3% on-task), and in the fifth and sixth lessons (average of 58% on-task).

Until the Coffee Morning I felt students were very engaged and committed. I think because we worked in a cross curriculum way. However, this didn’t work in the lessons in which students were processing their interviews. They all wrote something, yes, and they liked working on the computer.

[teacher; fragment 1]

Due to the perceived means-end relation with the upcoming Coffee Morning event, both teacher and students perceived the activities of constructing the questionnaire (lesson 1) and playing the drama-play (lesson 3) as meaningful. The teacher was very enthusiastic about both lessons. In the drama-play, for example, students spontaneously elaborated and embellished the written profiles. Students played their communicative roles seriously and were actively engaged in creating their own communicative experiences and situations/contexts.

Joseph played the profile of the carpenter very realistic. He was handicapped because of a wood splinter in his eye. Johannes had to laugh until Joseph and Denise told him that this situation could be for real next week: ‘If there will be an elderly with a handicap next week in front of you, then you’re not going to laugh, right?’

[teacher; fragment 2]

Evaluating the event of the Coffee Morning itself, both teacher and students stated that interviewing the elderly was meaningful. Interviewers and interviewees were mutually involved in creating whole authentic communication. Their serious involvement was reflected in their sociolinguistic and pragma-linguistic behavior concerning the elderly people. The teacher praised students’ sociolinguistic behavior and stated that students were very polite and caring in their communication towards the elderly. However the interviews were not as good as expected. The assignment of creating 10-subthemes led to students jumping from one subject to another, which made many students more involved with their questionnaire than with their interviewees.

Seeing this back, then I really think this is meaningful. The one who conduct the interview with the elderly, I really find engaged, I really have to laugh and I imagine that person (student) working in care and welfare in the future [...] We said ‘we are not going to interview just to interview’, but now I think ‘why not?’. When I see how well they conduct their interviews, then I’m very proud of them, although they are rumbling

off their questionnaire. But ok, that is also because they had to think too much of the sub themes and that's what they did as good students. Along the sub themes they thought of questions and during the interview they asked

[teacher; fragment 4]

Unexpectedly, the Coffee Morning event did not work as a meaningful data collection for writing an article on the early days and nowadays. The teacher noticed a discord between the content of the actual interviews and the content of the actual written articles. All 21 articles reported chronologically –writer based, in a knowledge telling fashion – what happened during the preceding activities in the lessons of Dutch and the lessons of Care and Welfare, on the event of the Coffee Morning itself, and conclusions or an opinion about the whole project as such. Only fifteen articles included some summary of the interview content, while six articles did not refer to the interview content at all. So, most articles were in fact off-topic: Students did not use their interview data as their main writing sources, nor did they put any effort in accomplishing any rhetorical goal to report.

The articles also show, some students really processed their interview data into an article, other students only wrote about the care & welfare activities during the Coffee Morning itself. Well, that's lost then, processing their data into an article is too difficult for them. The difference between what has been said in the interview and what one can read in the article is quite huge. [...] I found that they were very busy with illustrating and working on the layout, articles really looked stylish and students knew that articles had to be published in a journal. However, when I only look at the quality of their texts, I was very disappointed sometimes.

[teacher; fragment 5]

#### Reflective?

Intended reflective learning activities were mainly designed by deductive learning: using and applying theoretical knowledge in constructing communicative tools (questionnaire and the article). The design team copied sections of the textbook that discussed the communicative skills of interviewing and writing an article in a rather theoretical and abstract way.

In the second lesson students had to revise their interview plan by applying a piece of theory (worksheet designed based on theory section in students textbook): students should check their interview plan against the sort of questions one can ask and the functions which these questions fulfill in communication. Both students and the teacher perceived lesson 2 as 'redundant', due to the first lesson in which students already reflected upon the relation between their audience and what and how they could ask questions during the upcoming Coffee Morning event.

Interviewer: There was also a theory worksheet, do you remember?

Wietske: Well, the thing with that theory worksheet was a little bit strange because it was only afterwards and at that time we already had thought of sub themes and the questions, so actually it didn't help us. They had better given us that theory worksheet before. Denise: But it goes by itself, I mean, if you want to ask something about sports, then you first have to ask whether that person likes sports, perhaps he or she has a dif-

ferent hobby. I mean it is not so difficult, actually it is something you do spontaneously, without thinking too much about it.

[Students; fragment 5]

In lesson 1, students had already clearly understood that they had to envisage certain characteristics of their interviewees and that not all sub themes they generated were appropriate issues to raise in the interview in perspective of their audience. The teacher was surprised by the depth in which students discussed their sub themes and questions by envisaging characteristics and responses of the elderly people.

They [the students] asked whether one could talk and ask about sexuality. They really thought it through. I helped them with how they could formulate and ask their questions and they indeed talked about this theme during the Coffee Morning. That was really nice. [teacher; fragment 6]

Yes, things like someone could be a little bit deaf and then you should talk louder. Wietske dramatized on purpose that she was a little bit deaf and Wendy then had to repeat what she said and pay attention that she spoke clear and loud (Nikki; role observer/evaluator).

[student; fragment 7]

In between lesson 3 and the event of the Coffee Morning, many students revised their interview plan at home, based on the lessons learned in the drama plays.

Students discovered that they ran through their questions too quickly. They spontaneously thought of zillion extra questions. One of the students discovered that she formulated questions only suitable for a woman, while it was also most probable that she had to interview an elderly man. She planned to change/revise some of her questions. Most students elaborated their interview for the Coffee Morning on the computer at home.

[teacher, fragment 8]

#### Shared discourse?

Learning activities in lesson 1 (generating content for the whole class journal and the interview) and in lesson 3 (playing the drama play) were observed and perceived as shared activities. A shared discussion on both the target group of elderly people and the overall theme 'Early Days and Nowadays' in groups, helped students to generate appropriate sub themes and questions (lesson 1).

Nikki: I really think that we helped each other well and that we worked together very well. Well participated, well participated because it was also fun to do, also good to participate because we also had to do the interview for real

Wietske: For example other students had thought of all kind of questions about care in the elderly home. Being washed, and so on. But the elderly house is not such a kind of elderly house. We had thought about such things before. It is not that kind of elderly house, people do live independently.

[students; fragment 10]

Dramatizing the three interrelated roles and discussing the drama play in a small group, indeed appeared to trigger students' awareness about the target communica-

tive setting (e.g., students' own pragma-linguistic behavior, possible pragma-linguistic behavior of elderly people, potential precarious/critical sub-themes).

Nikkie: It was very clear that everyone had his/her own thing to do, those different roles I mean. However in case of the other assignment (constructing questionnaire) roles were also divided equally, everyone did the same amount of work.

Wietske: Yes, because when the other two are practising and doing their best, it is stupid to just sit there and wander around. I really tried hard to pay attention and to listen and to give useful advices and tips.

Denise: Some things are important after all and those things you can say and share. For example, I really found that Johannes spoke very softly and that was one of the things Isaid, because I think it could help him in executing the real interview. We all approached our assignments very seriously.

[students; fragments 11]

Note, however, that shared learning in these two lessons was not primarily urged by the shared goal of writing a whole class journal, but rather by the critical and authentic event of the Coffee Morning. Generating and pre-testing the questionnaire in lesson 1 and 3 were observed and perceived as shared activities. In contrast writing activities in the fifth and sixth lesson were not. Most students did not discuss content or any other aspect of their writing with peers. What students did was, based on their own memorized speech, writing an individual chronological summary about the preceding L1-language and Care & Welfare lessons and the event of the Coffee Morning.

Transferable learning outcomes?

Table 5 shows that lesson 4 event – the Coffee Morning –was intended as the transfer activity in which students would apply what they had learned during the L1 lessons in a realistic outside communicative situation in a vocational context. Students indeed felt that they could apply the learned lessons (e.g. communicative strategies as follow-up replies, addressing the interviewees in a formal way, speaking loud and clear). Students qualified themselves as 'well prepared' for the interview, although they stated that they were sometimes a bit surprised by the communicative behavior of their interviewees.

During the interview I also reflected on the questions and if the elderly answered very shortly, all right, keep asking and so that was something I was aware of and it was something I really tried to do. For example: what kind of food did you eat in the early days? Well, she just thought that was a silly question. But actually I don't think that's a silly question because I thought that the food could be quite different in the early days and that was something I wanted to know, but she told me that there was no difference in the food she ate in the early days and the food she eating nowadays. Well then I asked 'but then what do you eat nowadays?'

[students, fragment 12]

The teacher noticed a tension between students well prepared questionnaire and what the interviewees desired as communicative behavior. She attributed this tension to the design itself: constructing an interview plan with 10 different sub themes and 20 related questions must interfere to some extent with the demand of being

flexible and anticipating the communicative behavior and desires of the interviewees.

They thought of questions by each sub themes and they asked the questions. I don't know whether it is fair to expect that they understand, like a professional, that the old lady is dying to tell her the whole hospital-story. For this, we didn't train them, I think.

[teacher, fragment 13]

### 7.1 *Unexpected lesson learnt*

We would like to raise another lesson learned concerning the learning outcomes as mentioned by students in the evaluation. One of the main objects was contributing to student's communicative competences in relation to student's development of a vocational identity by means of integrating the first language subject and Care & Welfare subject. Although we intended the event of Coffee Morning primarily as an activity to collect data for the whole class journal, the event turned out to be significant as a communicative event with a relevant target group. Initially, when students came across the activities in the lessons preceding the Coffee Morning, shared discourse within the L1-classroom happened often with reference to students' own grandfather or grandmother or other elderly people from their lives. Others referred to the elderly people as being 'dull', 'boring' or 'old fossils'. These were initially the outspoken images of the elderly people. As the main lesson learned, students mentioned that they learned to socialize with the elderly people in general: interviewing them was not the same as conversing with their grandfather or grandmother, the elderly people didn't give the same reactions as their grandparents would have given. Other students wrote in their articles that the experience of the Coffee Morning was not as dull and boring as they thought it would be: going about with elderly people had been fun and informative.

Student: I think to socialize with elderly in a normal way. One talks differently to elderly than one does to your own grandfather and grandmother or teacher, something like that. Student: Yes, that's more difficult, so that's something you have learned.

Student: Yes, but I have already socialized with the elderly, grandfathers and grandmothers.

Student: Yes, but that's family. With them it is much more easy to talk than with the old people you don't know. If my grandfather was sitting there, I, in the first place, would have been more relaxed and knew to whom I was talking to and what his answers and reactions could be and with a stranger you just don't know what to expect.

[students; fragment 14]

It seems that the transfer activity (the Coffee Morning event) in itself functioned as a meta-cognitive experience (Flavell 1979, p. 906). Students refined their feelings and judgments of one of the target groups they could opt for to work with after pre-vocational training – the elderly people – and how to communicate with this target group. We experience this observation as an enrichment of the semantics of Meaningful in this context of pre-vocational education: the parameter Meaningful must be related to vocational identity matters.

### 7.2 *Four design parameters validated?*

The aim of this study was to explore the validity of a theoretical concept for designing instructional units in L1-curricula in pre-vocational education, where L1-education and the vocational program should integrate in a certain way. From various theoretical perspectives, we derived four design parameters for effective instructional settings, basically grounded in the concept of communities of learners: meaningful, reflective, sharing, and transfer. Through a design experiment we explored the validity of this set of four design parameters. From classroom observations and evaluations from the participating teacher and students, we defined activities that were effective manifestations of the parameters as planned, activities that were planned as manifestations but turned out to be not having served as such, and activities that –although not planned as such – proved to be an instantiation of one of the parameters. These analyses lead us to three main conclusions, which form an empirical informed theoretical network

Conclusion 1: The content validity of each of the four parameters

From this design experiment a better insight in the four parameters and their relationship emerged. This implies that now it is clearer what kind of instantiations these conceptual parameters can generate.

Parameter 1: L1-learning is meaningful; therefore one must create authentic communication

Most students experienced the ‘Coffee Morning’ as a trigger for active participation. Interviewing elderly people on a certain theme as a joint enterprise worked out well. All preparatory steps were experienced as relevant, as they were seen as contributing to the quality of the target situation – the meeting with the elderly people. From the classroom observations and interviews with the teacher and the students we learned that meaningfulness does imply more than ‘just’ create an authentic situation. There were various dimensions of meaningful learning involved that were not all anticipated at first sight:

- 1) learning about content (contrast and compare early days with nowadays),
- 2) learning about communicative behavior (how to prepare and run an interview with the elderly people), and
- 3) learning about vocational identity.

This last experience was not anticipated, and was first observed as a side effect of the instructional unit. Now, we tend to think that this experience, in the light of the educational context of prevocational education, is an important aspect of ‘meaningful’ in the context of pre- vocational education and must be better kept in focus when creating a meaningful authentic situation.

We also learned that the writing task following the interviews with the elderly people was not perceived as meaningful. For students, the meaningful experience ended with the interview itself. Here two perspectives on meaningful fight. From a perspective of an educational designer, the structure was meaningful: collecting data via an interview, ability to compare and contrast two periods of time. But for the

students, the whole process was not experienced as a research process, and the writing task was not experienced as a meaningful task. While preparing the interview was some collaborative act of all learners, writing the article was an individual, de-contextualized, typical academic act: no sharing with peers, no sharing with authentic readers, no authentic purpose for writing.

We also learned that creating a meaningful authentic situation triggers the creation of meaningful discourse between learners during the preparation of the target event (the learner dialogues). It is here that two other design parameters play a role: sharing and reflection. When students prepare their interviews, they feel a natural need to ask for help and to give advice: here they form really a 'community of learners': they exchange their experiences with communication with the elderly, they exchange knowledge about the old days, and they exchange preparations for the interview event. It turned out that this sharing in lesson 1 led to un-anticipated reflective actions, which made lesson 2 as planned, superfluous and boring.

Design Parameter 2: L1-learning is reflective: therefore one must create relevant learning activities: analyzing, abstracting and generalizing.

What we learned from this design experiment is that reflective activities should be designed as inductive thinking activities. In two cases of the instructional unit at hand, reflective activity was prompted by a worksheet adapted from the textbook, and in both cases it didn't work. On the other hand, reflective activity was observed in an unplanned situation (see table 4, lesson 1), where students envisaged the interview situation. In fact, what happened in lesson 1 might be called 'pre-flection': students imaged a certain situation, trying to represent the target interview situation in the best way. It might be worthwhile in designing other instructional sequences to be aware that reflection is not just 'looking back' on things happened, but also analyzing future situations.

A well designed reflective activity was created in lesson 3, where students participated in a role play and observed a simulation of the target interview situation. Students were not participants in the communication, but observers, and shared observations to abstract and generalize.

In both cases reflection was addressed to the target audience, the elderly people. From lesson 3 these activities triggered self chosen revisions of the interview scheme at home. In both cases, reflection was embedded in a shared discourse with peers (lesson 1) or with the whole class (lesson 3). At least in this design experiment, it seems that reflection is triggered via shared discourse.

Design Parameter 3: L1-learning is shared: therefore one must create dialogues, in communicative and in learning roles

Shared discourse was planned in lessons 1, 3 (preparations for the interview session) and 5 and 6 (writing the compare-contrast-article). Shared discourse only happened in lesson 1 and 3. Interestingly, these two lessons are also manifestations of the design parameters of 'meaningful' and 'reflective'. In these lessons, students prepared the interview scheme for the Interview Event, and the collaborative work generated

shared discourse and reflection. So it seems that shared discourse, driven by a meaningful event, triggers reflection: abstraction and generalization.

Design Parameter 4: L1-learning focuses on transferable learning outcomes: therefore one must create opportunities to generalize to other contexts

The key event in the design experiment was meeting the elderly people, which is one of the target groups students should be prepared to work with. This event served as a target transfer event: all what was learnt before had to be applied during this interview event. In this sense, the event was perceived as a transfer event. No data were available to what extent students experienced that what they learned as transferable to other similar events via abstraction of context and generalization of learning experiences. But from the description of the lesson we may infer that no planned reflection was undertaken on the learning experience itself to explore other situations in which what was learnt could be useful. In this respect, this design parameter was less well implemented as possible. The implemented reflection activity – discussing the experiences during the interviews – was evaluated as useful and pleasant, but mere from the perspective of ‘having been involved in similar situations’ than for the perspective of future situations.

Conclusion 2: Defining learning contents

All in all, the four design parameters as theorized were instantiated in the design, and the lesson design was effective in many but not in all respects. From the design experiment we learnt that other instantiations might have been more effective, as the design team realized afterwards when they re-designed the lesson series based on the experiences during the lessons. From the analysis and the designing experiences, it emerged that the relation between the four design parameters is more complex than just an additive list with which we started. The design parameters are linked to each other in a means-end scheme.

First of all, in pre-vocational secondary education the potential developmental endpoints of an instructional L1-unit should be stipulated as the communicative competences related to the students’ vocational identity (design parameter 4 and 1: the Transfer and the Meaningful parameter). Therefore, the L1-curriculum and the vocational curriculum should be integrated in one way or another. For building our argumentation we draw on Moffetts’ distinction between the rhetorical I-you relation and the referential I-it relation that together composes an authentic whole communication. Integration of the L1-curriculum and the vocational curriculum, can be established by either shifting the focus towards the rhetorical I-you relation or emphasizing the referential I-it relation. Integration through the rhetorical I-you relation means: learning to communicate with a relevant vocational target group (parameters 1 and 4). Integration through the referential I-it relation means: communicating to learn about content related to the vocational training. Regarding the formulated potential developmental endpoints, the former is preferred over the latter. A real communicative encounter on the one hand stimulated students to refine their feelings and judgments of one of the target groups they could choose to work with after pre-vocational secondary education and on the other hand taught students how to com-

municate with this target group. Arguing from the L1-learning perspective, integration via the rhetorical I-you relation calls for communicative tasks and contexts in which a specific audience to which the communication is addressed plays a significant role. This analysis implies that parameters 1 and 4 are involved when educational designers choose the learning content: what has to be acquired?

### Conclusion 3: Design parameters interact

One could consider the four design parameters under the umbrella ‘instructional design that promotes learning for transfer’, since transferable learning outcomes is the ultimate goal. Then the parameters of meaningfulness, sharing and reflection must serve this ultimate goal: they are means to achieve transferable learning outcomes. In the case we analyzed, almost all learning activities contributed to the Coffee Morning activity: they were perceived as functional in the light of the target context. That was not the case with the writing lessons following the Coffee Morning activity: the Coffee Morning was not perceived as means to write an interesting article, while the designers had planned so. Figure 2 shows how we see these design parameters related.

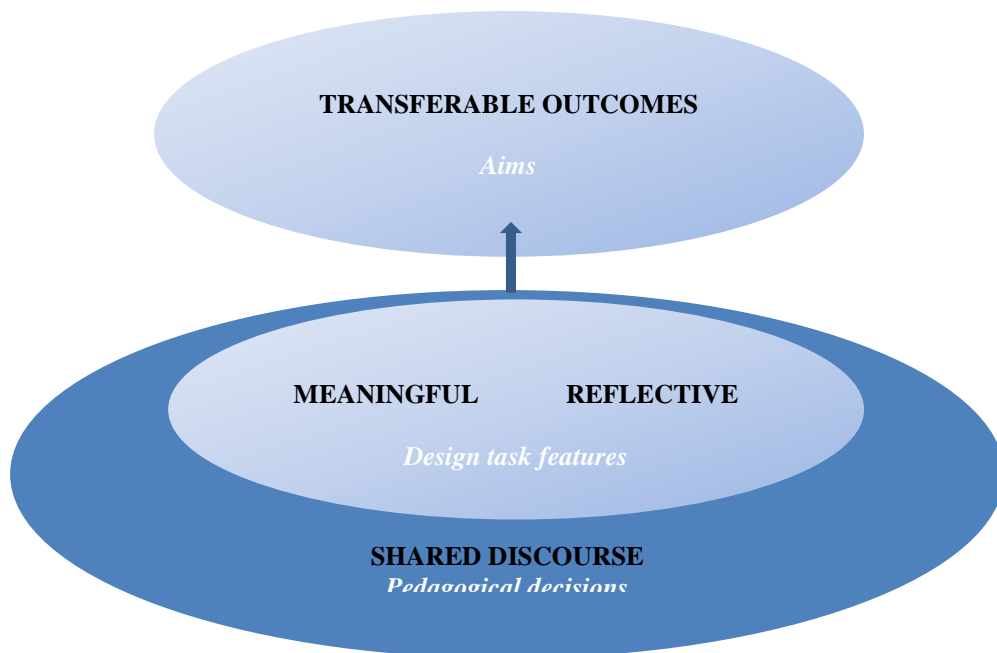


Figure 2. Interaction of the four design parameters.

Transferable learning outcomes can be realized by meaningful and reflective learning activities, which both need shared learning to establish communicative and learner dialogues. Shared learning is then the necessary pedagogical format that

stimulates meaningful and reflective learning activities. Shared learning strengthens meaningful and reflective learning.

Meaningful learning activities are activities in which students can use the learning context in either two ways: 1) to retrieve relevant previous knowledge and communicative experiences and 2) to envisage critical future communicative context. Meaningful learning activities can fulfill conditions for transferable learning outcomes when students perceive or create similarities in training and transfer contexts. That is, students should be well prepared to know certain communicative characteristics of their audience and how their audiences and they themselves relate to the topics of communication. Knowledge about the audience is part of the vocational learning content. Furthermore students should be involved in language processing tasks that deliver functional tools that are of use for the transfer contexts or that have a clear means-end relation referring to the transfer contexts. At the same time these contextual cues trigger students to reflect, so meaningful and reflective learning occurs hand in hand; language processing tasks are imbedded in language learning tasks. Reflective learning can fulfill other conditions for transferable learning outcomes when students perceive similarities in training tasks and transfer tasks. That is, by participating in language processing tasks, students should become aware of which communicative strategies enable them to perform this particular task (e.g. interviewing) or what criteria their tools (e.g. questionnaire) should meet to be of any use in the transfer task. So students are able to use communicative strategies/tools and their knowledge about them to solve communicative problems in the transfer contexts.

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