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A typology of learner profiles to anticipate and guide differentiation in primary classes

Stéphane Colognesi*
Professor
Faculty of Psychology and Educational Sciences
IPSY : Psychological Sciences Research Institute
PSP
Place Cardinal Mercier 10/L3.05.01
1348 Louvain-la-Neuve
ORCID : 0000-0001-5763-5873

Josée-Anne Gouin
Professor
Faculty of Educational Sciences
Department of Teaching and Learning Studies
Pavillon des Sciences de l'éducation, local 1170
2320, rue des Bibliothèques
Québec (Québec) G1V 0A6

* corresponding author : stephane.colognesi@uclouvain.be

Abstract

While some research has highlighted how teachers prepare their course materials, little is known about how future teachers design support for their students, and thus plan and anticipate what can and will happen in the classroom. We have therefore sought to investigate whether identifiable learner profiles emerge when regular primary school students are offered a complex task: How students respond to the task? How well they perform? The ambition was to develop a typology of profiles concerning student task engagement that would allow any teacher to anticipate regulatory actions that would be matched as closely as possible to the realities of the classroom. To do this, we observed 282 French-speaking Belgian students aged 10-12 years old in the first moments of

performing a complex reading task. The data analysis revealed that six learner profiles can be used to plan teaching activities : the ‘regular’ student, the student who gets discouraged because the task seems too complex, the one who gets blocked during the task, the one who bypasses the actual task without achieving the learning objectives, the one who does not engage in the task and the high-performing student who finishes faster than the others.

Keywords

Adaptive teaching; Complex task; Learner profiles; Lesson planning; School engagement

Introduction

In the literature, there is the notion of the 'archetypical student' (Ronveaux, 2014), namely, the student whom the teacher usually thinks about in general when preparing a learning activity, or the student 'mentally constructed by the teacher to guide his action' (Goigoux, 2018, p. 45). This means that this is also the student 'who actually carries out the task in a school activity' (Ronveaux, 2014, p. 24). So, teachers plan with an archetypal student in mind, but not all students fit this profile.

Therefore, teachers need to adapt their instructional plan during teaching–learning activities. Indeed, the organization of the work of a teacher has undergone a profound transformation in recent years, leading teachers to adapt to a plurality of complex classroom situations: they encounter a greater number of students with learning or behavioral difficulties, as well as varied learning rates (Hadar & Brody, 2010). One of the central skills enabling teachers to adapt their teaching to these complex situations involves the planning of teaching–learning situations. Indeed, several European and Canadian university courses are based on professional competence repositories. Within the Belgian (Conseil Supérieur Pédagogique, 2011) and Canadians (MEQ, 2001) formation curriculum, this competence is at the centre of the development of the professionalization of trainees. It is also at the centre of courses and internships. It is often neglected by future teachers because of a lack of time or because they do not see the relevance (Ruys, Keer, & Aelterman, 2012).

As professors who are teacher trainers and researchers in the teaching–learning field at our respective universities, we regularly assist trainees and teachers in planning teaching–learning situations. Planning for lessons goes through three phases (Deprit & Van Nieuwenhoven, 2018; Tochon, 1989): the pre-active phase, which consists of planning before the lesson; the interactive phase, which refers to cognitive planning during action to adjust the activity to what is happening; and the post-active phase, which is carried out between two lessons based on what has been experienced. In practice, the pre-active phase of the classroom activity is commonly referred to as planning (Clerc & Martin, 2011). While some research has highlighted how teachers prepare their course materials (see, for example, Coppe et al., 2018; Law, 2009), little is known about how they design support for their students, and thus plan and anticipate what can or will happen in the classroom (Deprit, März, & Van Nieuwenhoven, 2019). We are making a case for teachers explicitly thinking about how they will adapt activities during lessons as they plan, rather than planning with only the 'archetypal student' in mind. In particular, it might help if teachers were thinking before they teach about adapting instruction to different student profiles.

Some typologies already exist to help teachers plan their teaching. As Given (2008) noted, "Typologies are common in the human sciences and are often used to distinguish among behaviors…[their] goal is the development of a set of related but distinct categories within a phenomenon that discriminate across the phenomenon" (p. 901). In the field at issue here, some typologies have been criticized in the literature. For example, one finds learning styles (visual, auditory, reading/writing or kinesthetic learners) as a proposed typology, but they "suffer from weaknesses that lead them to the opposite of their stated goals" (Sander,

Gros, & Gvozdik et al., 2018, p. 57). No study so far has been able to support these hypothesized learning styles (Rousseau, Gauthier, & Caron, 2018). Another is the typology of multiple intelligences, which "however appealing it may be, seems to lack a solid empirical foundation" (Sander et al., 2018, p. 73). Other theories have suggested that novice and expert students exist (Bassok, 2003; Brand, Reimer, & Opwis, 2003; Muir, Beswick, & Williamson, 2008; Zimmerman & Campillo, 2003), namely, students who have low versus good skills for performing the assigned tasks. Believing that this dichotomized view must be overcome, Hanin and Van Nieuwenhoven (2019) identified multiple emotional profiles of students in the process of learning to solve mathematical problems: the bored, anxious, resigned and positive profiles. Unlike the first two typologies, the novice/expert learner distinction and the emotional profiles have empirical support.

Beyond the novice and expert learner categories and the emotional profiles, it also seems important to know the reactions of students at the beginning of a learning process. That is, it seems useful to know how they engage (or not) in a task assigned to them. This can support taking the diversity of learner profiles represented in the class into account when planning lessons. It is a way of being able to better respond to learners' needs during the learning process.

In this study, we studied the behaviors of 282 students aged 10-12 who faced a complex reading task in the so-called 'regular' classroom. The objective of this research was to develop a typology of learner profiles to help teachers prepares their interventions.

Theoretical framework

The two key areas addressed by the theoretical framework are (1) adaptive teaching (for teachers) and (2) school engagement and self-regulation (for learners).

Adaptive teaching

Adaptive teaching means having the ability to adjust one's practice in response to student reactions (Martin, 2017; Martin, Collie, Nejad, Colmar, & Liem, 2015). This professional task is complex for teachers (Loughland & Alonzo, 2019; Pecherberty, 2003). However, adapting the learning activity by tailoring interventions and help is part of effective teaching practices (Ko, Sammons, & Bakkum, 2014). Indeed, to ensure effective guidance, it is necessary to have considered the different student learner profiles that co-exist in the classroom in order to anticipate the interventions and the help to be provided (Lery Santos, Bonnefon, & Tricot, 2019). It is therefore important for teachers to have points of reference for doing this, and to be able to anticipate the reactions students may have.

The concept of scaffolding, developed by Bruner (1996) following the work of Vygotsky (1934, cited by Bruner, 1996), takes on its full meaning as a form of action to support the student in such a situation. It highlights how the adult organizes their interventions to ensure the student's learning and enable the student to perform a task alone that they did not know how to do at the beginning. Bruner (1996) explained:

> *This support essentially consists for the adult in taking charge of the elements of the task that initially exceed the beginner's abilities, thus allowing him to*

> *concentrate his efforts on the only elements that remain in his field of competence and to bring them to completion.* (p. 277)

Based on this principle, Bucheton and Soulé (2009) identified three types of functions that scaffolding can perform. First, scaffolding can have a support function, where 'the teacher accompanies the students in their learning process (based on knowledge and experience, screening - focusing, how to do it, the synthesizer as sub-categorizations)' (p. 271). Secondly, it can have a deepening function, where a focus is placed by the teacher on an aspect of a student's approach and/or productions to lead them to deepen it). Third, scaffolding can have a control function, where the teacher ensures the accuracy of students' responses and validates them.

Scaffolding as a way of supporting students (Bruner, 1996; Karabenick, 2013) therefore requires the teacher to reflect on the learning tasks (instructions, flow) to enable students to learn by removing certain obstacles. However, for students to learn, they must be confronted with obstacles that they can surmount (Astolfi, 1992; De Vecchi & Carmona-Magnaldi, 2002; Mayer, 2004; Tobias & Duffy, 2009). Problem situations are a good way to start. They are based on the construction of knowledge by the learner from a perspective of 'learning by and in action' (Rey, 2015, p. 21).

That consists, as Rey, Carette, Defrance, and Kahn (2006) explained, 'in proposing to students a (school) task that we know they are not in a position to perform with their current state of knowledge, but which is close to that state and whose statement they can

understand' (p. 149), with the objective of generating new learning. But it also means making students realize for themselves that the current knowledge they have is not enough (Astolfi, 1992) and that they must acquire new knowledge to overcome the obstacles they face. In addition, the knowledge to be learned should be identified before, during and after the learning process (Tricot, 2017).

De Pietro (2015, p. 49), in the context of the French classroom, stated that 'what matters is neither the social relevance nor the contextualization of the activity but its potential to teach and the interest it is able to generate'. In this respect, researchers have agreed that both writing and reading are complex activities that require the simultaneous implementation of a series of language-related actions (Colognesi & Lucchini, 2016, 2018 ; Fayol & Schneuwly, 1987). Thus, as soon as a student is presented with a reading or writing activity having a precise and determined objective, they engage (or not), with what they know, in solving a problem.

Self-regulation and School engagement

Efklides (2008), following Carver and Scheier (1998), explained that "self-regulation is a voluntary process to ensure action to achieve personal goals" (p. 282). Hanin (2018), based on the work of Zimmerman (2001) and Wigfield, Klauda, and Cambria (2011), considered self-regulation as "a regulatory process that can be applied to the different dimensions involved in learning - cognition, emotions, motivation, behaviour - and metacognition as the regulation of one of these dimensions, namely, the regulation of cognition" (p. 56).

Self-regulatory behaviors are not acquired spontaneously and automatically (Schunk, 2001). Thus, external interventions are important (especially those by the teacher mentioned in the previous section). However, it is self-regulatory behaviors alone that ensure learning (Allal, 2007).

Archambault and Vandenbossche-Makombo (2014) connected the concept of self-regulation with the concept of school engagement. Several qualities define school engagement: direct involvement in the classroom, participation, and occupation in a learning situation (Fredericks, Blumenfeld & Paris, 2004). School engagement involves three dimensions: emotional engagement, behavioral engagement and cognitive engagement (Fredericks et al., 2004).

The emotional dimension of engagement is directly related to students' attitudes, reactions and emotions about school, their classroom and school subjects. In the literature, this dimension has been associated with a sense of belonging at the school (Jacobs, Lanza, Osgood, Eccles, & Wigfield, 2002).

Behavioral engagement includes all student behaviors that are beneficial for their adaptation in the classroom. Three behavioral axes have been identified (Fredericks et al., 2004): positive behaviors (active presence in class and listening to instructions), involvement in school tasks (effort in the various tasks assigned) and participation in extracurricular activities (activities carried on outside the classroom).

Cognitive engagement refers to students' use of various strategies to plan, organize and carry out their work (Fredericks et al., 2004). Cognitive engagement is represented by students' active involvement in their learning (use of various means to complete tasks). Students who are cognitively engaged want to meet and exceed academic requirements. They are concerned about success (Archambault & Vandenbossche-Makombo, 2014). With that in mind, school engagement is often linked with academic success: the greater a student's engagement with a given task, the lower their level of boredom and the more interested they are in learning (Jimerson, Campos, & Greif, 2003).

In addition, two predictors have been identified as motivating the student to complete the proposed tasks (Eccles & Wigfield, 2002). The first is task value. There are four distinct components to task value: (1) interest, which represents the pleasure one can have in engaging in a task ("intrinsic value"); (2) importance, which refers to what the task represents in terms of personal values and the individual's self-image ("attainment value"); (3) utility, which refers to the instrumentality of the task in relation to the individual's current and future goals ("utility value"); and (4) cost, which refers to what the individual loses by choosing to engage in the task ("cost"). The second predictor is expectancies for success. Students must believe that the proposed obstacles can be overcome.

This study

We have thus sought to find out whether specific learner profiles emerge in regular primary school classes when students are offered a complex task, understood as a task that will

generate obstacles and questioning and open up different strategies for accessing new knowledge (Astolfi, 1993; Tardif, 1992). The ambition was to develop a typology of profiles that would allow any teacher plan their regulatory actions to match as closely as possible with the realities of the classroom. To do this, we observed 282 French-speaking Belgian students aged 10-12 years old, in the first moments of performing a complex reading task. This age range was chosen because, on the one hand, students should have the overall reading skills to engage in the task. On the other hand, choosing students at the end of primary school allows us to reasonably believe that our typology could be suitable for the preceding years (8 to 10 years old), as well as for the beginning of secondary school (12 to 14 years old). This could allow their profiles to accompany students from primary to secondary school, thus ensuring their successful transition (Vinson, 2006).

The observations we made enabled us to develop a typology of learner profiles. Case studies with students from the different profiles provided comprehensive information on their reactions and needs.

These profiles and field observations could eventually be integrated into university courses so that trainees have a better picture of the 'regular' classes around which to mobilize their professional skills, mainly those related to planning.

Methodological framework

To meet our research objective (to develop a typology of learner profiles to enable teachers to anticipate the actions they will need to take), we made certain choices. The first was to focus on a complex reading task in French language class. The second was to work with

the teachers. In this way, we were engaged in participatory research (Bourassa, Bélair & Chevalier, 2007).

We worked in three phases. First, we went to a single classroom where, through detailed observation and coding, we were able to develop an initial categorization of profiles. Second, we validated this categorization with 258 students from five schools. Third, we conducted case studies (Merriam, 1988) to obtain specific information on the functioning of the identified profiles.

Sample

Our sample consisted of 282 pupils aged 10-12 years old from 15 classes randomly chosen throughout French-speaking Belgium. These are schools that have collaboration contracts with the Universities of Teacher Education to host teacher trainees. Field teachers are therefore our regular partners.

The first phase of the study (determining emerging profiles) involved working with a class of 18 11-year-old students, 10 girls and eight boys, from an urban school with an average socio-economic index[1]. The second phase of the work (validating emerging profiles and identifying their frequency) required larger data collection, in 13 classes of 10- to 12-year-

[1] The socio-economic index is determined according to five main categories: per capita income, graduation level, unemployment rate, professional activities and housing comfort. A formula is used, weighting each of these categories, to arrive at a synthetic index assigned to each student according to their sector of residence. The lower the index, the lower the socio-economic background of the institution. The index therefore makes it possible to rank schools on a scale of 20; schools ranging from 1 to 5 are differentiated and receive additional funding for the supervision of exceptional pupils (in the form of teacher periods or operating budgets).

old students. These classes came from five schools with various socio-economic indices. It should be noted that we asked the teacher to identify, for each class, the students diagnosed with a learning disability. These students, 13 in total, were taken out of the sample. The total number of students participating in this phase was 258, 135 girls and 123 boys. The details, class by class, are given in Appendix 1.

The third phase of the work brought together three students from a single class, each belonging to a different profile: a girl and two 12-year-old boys. They were selected because they belonged to the three specific profiles most often observed in Phase 2. These students were from a school in the center of the capital, with a socioeconomic index of 3 on a scale of 20. It seemed to us that having information from students from a school with a low socio-economic index could provide us with interesting information, in particular, on the learning difficulties and needs of the students. Thus, it seems that what is learned in this investigation could be an asset for interventions in all socio-economic backgrounds.
This study was conducted in accordance with internationally recognized ethical guidelines and the ethical code of the Belgian Bureau for Science Policy (www.belspo.be).

The complex task

In all classes, students completed a reading puzzle (Marcoin & Calame-Gippet, 1999). This is a complex reading task aimed at developing comprehension strategies by focusing students' attention on those aspects of the text that ensure cohesion. More concretely, each student received a text that had been cut into several strips, which were then mixed up and

put into an envelope. Each student in the same class got the same text. Their task was to recreate the original text by putting the text pieces in the correct order. It should be noted that the texts given to the students were not the same across all classes (three different texts were used, according to the classes); they were chosen in consultation with the teacher according to the overall reading level of the group, so that the activity was indeed a complex task with a surmountable obstacle, while the overall difficulty level was identical. In all classes, the activity followed the steps presented in Table 1. Step 4, in grey, was the subject of our observation.

Table 1 - Steps performed in the classes

1. The teacher presents the objective of the activity to the students. He or she clarifies the intent: to enable them to acquire strategies to make them more effective readers.	5 minutes
2. The title of the selected text is noted in the table. Students are invited to say their hypotheses about the genre and content of the text.	
3. The teacher gives the students work instructions : 'You will receive the text in the form of strips. Your challenge is to put the strips back in order to recreate the original text. You will begin by working alone for 20 minutes, without any help.' These instructions are repeated by a student.	5 minutes
4. The students receive the strips in an envelope and are able to work as they wish in order to complete the task. They work alone (independent work). It was in this stage that observations were made.	20 minutes

5. The students exchange with each other. It's a time for collaboration in groups of 2-3 students, who are invited to discuss and debate in order to arrive at a common solution	10 minutes
6. The teacher questions the students. The task is corrected collectively. Effective strategies are recorded on the board. Teacher rereads the entire text. Students they glue strips on a sheet of paper. Students write on a piece of paper what they remember from the activity.	10 minutes

This activity was prepared as part of a module for the training of future teachers. The activity was conducted by a trainee in his or her practicum class. The tutor was in the back of the class. He could therefore be available to observe the students.

Data collection and analysis

Phase 1

For the first phase, initial observations were done in a single class. The researcher and teacher observed the students at work, taking notes. The students were filmed during their work, which allowed the two observers to review the video several times and compare their perceptions. These various observations made it possible to develop an initial grid of learner profiles, co-developed between the researcher and the field teacher. These categories of profiles were initially inductive. They were then associated with elements of our theoretical framework where possible. They are specified in the phase 1 and 2 sections of the results.

Phase 2

The same observation of students at work was done in 13 other classes. The researcher arrived early each time, to explain to the class teacher the observation task and the categories already developed. Each observer had a grid to use, in which to assign a profile to each student (basically a tally sheet for types of profiles). The two observers then together assigned each student a profile based on their observations. This was achieved through discussion/negotiation between the two observers, either live during the activity or immediately after the activity. The information was encoded and made it possible to produce descriptive statistics.

Phase 3

To obtain more precise information on the behaviors of the students, and more specifically on the profiles most often detected in the previous phase, in one of the classes, we took in several students from different learning profiles. These students re-do the same task with a different text. This was not done in the context of the whole class completing the task. We filmed this students while they were completing the task. This made it possible to observe their behavior several times, including non-verbal communications, gestures, and so forth. In addition, during the course of their work, these selected students were asked metacognitive questions (Colognesi & Van Nieuwenhoven, 2016; Colognesi et al., 2019, 2020) that were intended to lead them to explain online what they are doing, why they are doing it, the difficulties they encounter, and the like. These responses were transcribed and analyzed as discourse (Maingueneau, 1999).

Presentation of the main results

Phase 1: five emerging profiles

The analysis of students' observable behaviors, both live and on video, revealed five types of emerging profiles, detailed in Table 2. All of the students in the class were able to fit in one of these types. First is the student 'who does as planned'. This refers to the archetypical student of Ronveaux, (2014). Second is the student who gets discouraged because the task is too complex. For this student, the obstacles to be overcome are too great (Astolfi, 1992; De Vecchi & Carmona-Magnaldi, 2002; Mayer, 2004; Tobias & Duffy, 2009). They do not have a good expectation of success (Eccles & Wigfield, 2002). Third is the student who works effectively. This student uses a variety of strategies to plan, organize, and complete their work, demonstrating cognitive engagement (Fredericks et al., 2004). In this sense, this student self-regulates without the need for external intervention (Allal, 2007). Fourth is the student who gets blocked. Unlike the previous type of student, this student does not have all the necessary strategies. In order to move forward and self-regulate, they need external intervention (Allal, 2007). Fifth is the student who sidesteps the actual task. This student has no behavioral engagement (Fredericks et al., 2004), because although they "seem" to do the task, in fact they are doing something else (e.g., handles the test strips but does not read). They do not respond to the directions, nor do they make the effort to do so. Each student corresponds to only one profile in the first few minutes of work. There is no overlap.

Table 2 – First categorization: five emerging profiles

	Does as planned	**Gets discouraged**	**Works efficiently**	**Gets blocked**	**Bypasses the task**
Commitment	Embarks on the task	Embarks on the task	Embarks on the task	Embarks on the task	Embarks on the task
Work processes	Uses trial and error	Has difficulties (non-verbal Communication)	Knows effective strategies (look, gestures) - Step-by-step work. Correct work	Starts correctly, then hits a 'bug'	Misses the objective (does not read - puzzle) - incorrect work
Asking for help?	Does not ask any questions	Very quickly solicits help from the teacher	Asks the teacher what they need to do when they have finished	Seeks the teacher for help. Need assistance to develop a strategy	Does not solicit help from the teacher Observes the surroundings
At the end of the 20-minute	Progressing at the pace set out in	Gave up the task a long time ago : cognitive	Successfully completed	Still at work, but without	Seems to be at work

observation period	the planning of the learning activity	overload (too complex)	success

Thus, the only common point of these five profiles is that they all embark on the proposed task. Then they behave differently, as shown by the elements in the table.

Phase 2: Validation and frequency of profiles

Our analysis of the entire, larger sample showed that, on the one hand, the profiles proposed in the original grid were observed and, on the other hand, that others also emerged. Table 3 presents a summary of the profiles obtained at the end, with giving the frequency and percentage of times they were observed in the sample.

Table 3: summary of profiles

Profile	Definition	Number of observations	
		Frequency	%
Does as planned	The student progresses in the task without getting discouraged. No specific signs to note.	154	59.8
Gets discouraged	The task seems too complex to the student, who quickly gives up.	30	11.6

Gets blocked	The student engages in the task but gets blocked after a while, seeming lost and waiting for help from the teacher. A strategy is lacking. He need assistance to develop a strategy.	28	10.8
Works efficiently	The student has no difficulty, moves fast, finishes before the others. Their answers are correct.	26	10.1
Bypasses the task	The student looks like they are working, but does not realize what is being asked: they engage in the task, but manipulate the strips without reading them and without trying to find links between the parts of the text.	13	5
Lacking desire	The student does not engage in the task, expressing that they do not want to do it.	7	2.7
TOTAL		258	100%

While nearly 60% of the students (154 individuals) did not seem to have any particular difficulty, did not ask for help in the early stages of the project and progressed at the pace we expected, the others, who made up 40% of our sample (104 individuals), positioned themselves differently. Either because they need help. Or because they're faster.

Three specific profiles stand out in the sense that they were present in all classes where we collected data: students who get discouraged (11.6%); students who encounter a blockage (10.8%), that is. who at a given moment need a major strategy or scaffolding to be able to progress; and those for whom the task poses no difficulty, which means that they complete

it quickly and correctly (10.1%). Since these profiles occurred in all classes observed in our study, it is reasonable to believe that these learner profiles should be given special attention in the planning of instruction.

Two other specific profiles appeared, but were less frequent. First of all, there were relatively few examples of the profile of the student who seems to perform the task but who actually circumvents it (5%), that is, who pretends to read and does not read, who moves the pieces of the puzzle without a strategy in place to arrange them correctly. And then there was the profile of students who do not want to enter into the task (2.7%), unlike all the others, who commit themselves, even if only for a time, to what is offered to them. The students in this last profile either clearly expressed that they did not want to do what was asked for, or showed it by engaging in another activity, for example, reading a comic book. They do not have a positive reaction or attitude to learning, and express this through disinterest. This may be related to a lack of emotional engagement (Fredericks et al., 2004). They do not perceive the task's value (Eccles & Wigfield, 2002).

It is thus interesting to note that if the teacher did not intervene, the others, making up 40% of the participants, need a directive. Either they were experiencing difficulties and needed assistance. Either they had completed the task correctly. In this case, they are at a standstill awaiting instructions. Then they may get bored. Or disrupt the flow of activity.

A closer look at three frequent profiles

In this section, we present the results from phase three, in which three students were followed during the course of the learning: ALI, who gets discouraged, POL, who gets blocked, and BEN, who is fast and efficient. These three profiles occurred relatively frequently (and in all classes observed) and would require teacher intervention. The analysis of the individual responses these students gave to the metacognitive questions made it possible to highlight interesting aspects in understanding how they were working and learning. Illustrative excerpts from the interviews during the course of the learning activity are presented below to provide further information.

When we observed ALI's way of working, we saw, through her non-verbal communication and gestures that she was quickly overwhelmed by the task. As soon as she pulled out the strips of text, she found the title directly (thanks to the bold characters, she explained), then tried to put the other strips in order. She blew out her breath, crossed her arms, resumed moving around the strips, and crossed her arms again. At that point, the researcher questioned her:

> *RE (researcher): What are you thinking about?*
>
> *ALI: It's too complicated // there are too many strips / I don't know where to start.*
>
> *RE: How do you get started?*
>
> *ALI: I found it. That's the title // because it's in bold // But then. good / I don't know.*

After this intervention, ALI resumed moving the strips around on her bench; she started reading them again, some fell off. ALI sat back and said, ‘It's too complicated, I'm done’.

Although engaged in learning, ALI quickly became discouraged because she perceived the task as too complex for her, with a low expectation of success. The information she then provided makes it possible to consider ways the teacher could intervene:

RE: What would you need now?

ALI: help / I don't know // I don't know // I get given clues // what clues // the first few

sentences where there are too many strips

Thus, in planning for students in this profile, several avenues can be considered. In the case of the text puzzle, dividing the task into subtasks (indicating which strips to start with, in this case) could be a possibility.

The way POL worked was not the same. Although, like ALI, he got involved in learning, he founds solutions to move forward faster than ALI. He placed all the strips in front of him, and managed his space. On the left, he laid out the strips he was reading, on the right he put the strips that recreated the text. He worked initially with a strategy that he explained to us: 'it makes a story'. Nevertheless, after four strips thus positioned, POL blocked because that strategy no longer seemed to work. Indeed, at that point, there was a change in the text, and the characters were talking to each other, which was not the case until then. It disturbed him:

RE: What's going on?

POL: I don't know / I can't find anymore / I don't know anymore / maybe this one can

be fine / no / I can't see

RE: What do you need?

POL: Will you help me / show me the next strip?

From this last sentence, where POL tried to get help from the researcher, we see that he was lacking a strategy to move forward. A list of interesting strategies to use could also help POL, who until the point of being blocked had only been concerned with the overall meaning of the story. For BEN, these difficulties did not arise. He quickly and correctly carried out the proposed task, and engaged in targeted learning. From our observations, it appeared that this student engaged in learning with the desire to succeed, which he confirmed: 'It's a challenge, I'll do it, it's good'. BEN worked by trial and error, read a strip of text, deposited it in the right place. he uses several strategies. He had no difficulty in expressing orally the strategies he was using to accomplish this:

RE: How do you do it?

BEN: There are clues / the meaning of the story / there you can see it well, it follows for

example / There are sentences cut out in the middle / enough to look at the subject and

the verb what // they agree // the punctuation / it helps me / there / there / there are open quotation marks / bah, it is a clue / there it is, the strip with closed quotation marks

/ then they talk

When BEN is finished, he asks if 'it's good'. What he saw as a challenge at first seemed 'too easy' in the end. What he explains is interesting in terms of managing faster students:

RE: Do you often end up like this very quickly?

BEN: Yes

RE: And what do you do then?

BEN: Well, often / at least / I'm made to go and help others.

RE: And you like doing that?

BEN: It depends // not always // well // I don't always want to help others // sometimes I'd like to do something for myself.

RE: And it never does?

BEN: If / I can go to the reading corner or what / but after 5 minutes I have to come back / to correct / or to help others / and I don't feel like it because I've just started to read what

We learned that for Ben, an efficient and quick learner, going to help others after he has finished the task is sometimes constraining, if it becomes systematic. Moreover, allowing him to do anything else does not seem to suit him either, since he feels he does not have enough time for that. In short, the possible ways forward would involve keeping BEN busy, while giving him instructions to continue to develop his skills related to what is being worked on. For example, it might be interesting to have him write down his strategies (an indirect way of producing support for others, who could then read BEN's ideas). Complexifying the task at the beginning can also be a promising way for BEN to feel challenged, while keeping the task broadly similar to what the others are doing. In the case

of the puzzle, one could have put in extra strips that did not belong, or mixed two texts on the same theme instead of one.

Conclusion and prospects

We have shown that when observing students who are performing a complex reading task, distinct learner profiles appear. We have identified six of them: the 'regular' or 'archetypical' student, the student who gets discouraged because the task seems too complex, the one who gets blocked during the task, the one who bypasses the task without achieving the learning objectives, the one who does not engage in the task and the high-performing student who finishes faster than the others. These profiles can offer the advantage of helping the teacher to provide the necessary support for the smooth running of classroom activities. For this complex task, at least. Possibly for other complex tasks.

Indeed, these profiles position themselves as so many ways for teachers to plan their learning activities (Deprit & Van Nieuwenhoven, 2018). We hypothesize that a teacher who does not take learner profiles into account when planning a teaching–learning situation will not be able to meet the support needs of some students. Our results showed that the archetypical student (Ronveaux, 2014) made up nearly 60% of the classes where the observations were done. Forty percent of the students engaged in the task differently: some had difficulty or finished quickly, others did not complete the task and pretended to be at work. These results also show the relevance of a teacher thinking beforehand about how they will guide students who do not keep pace and others who finish tasks quickly, in order to avoid problems of discipline and disengagement.

Indeed, we note that teachers starting out in the profession are concerned about meeting the needs of each student during the course of their work. Thus, every time a student raises their hand, the teacher tends to go to them to intervene. This quickly becomes complex in the reality of a class where several students, sometimes many students, have demands at the same time. This can cause stress and discouragement for teachers in the workplace, as adapting to student demands is a complex task for the practitioner (Loughland & Alonzo, 2019; Pecherberty, 2003), especially in the early years of the profession when they lack experience. In this sense, our typology certainly has the advantage of encouraging teachers to think ahead to plan their support.

However, some caution is required. Indeed, these profiles, intended for activity planning purposes, should not be used to label students and place them in a particular category of learner. It seems to us, and this is an interesting avenue of research to explore, that the learner profiles assigned to students are inherent in the different academics tasks to be performed. Indeed, each academic task might have its own set of profiles. And/ or a student might have a different profile depending on the academic task.

In our observations, we focused on the first few minutes of student work on a complex reading task without teacher intervention. It is not certain that a student who is discouraged in this situation will face the same task in another subject, such as mathematics or history, for example. Moreover, a student is not confined to a single profile, in the sense that after having gone through a reaction (getting discouraged because the task seems too complex), they can, after the teacher's intervention, slide to another profile (getting blocked because

of a lack of strategies). Another limitation is that we did not take into account the opinion of the student himself. To investigate this, it might be interesting to use a questionnaire to determine how students felt about the task. This would allow us to improve the learner typology in order to better understand students, by including their emotions and feelings.

Finally, it would be relevant to look at the evolution of learners' profiles over a longer period of time. Indeed, if a teacher develops student autonomy throughout the year, we can believe that the students' profiles will evolve. It would also be interesting to look at these profiles in various disciplines in order to establish comparisons and effective ways for teachers to take action in response to each profile and task.

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