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Listening to the Learner: Harnessing Learner Characteristics to Shape School Reform

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Introduction

More than three million children go daily to the primary schools of Italy, and yet hitherto little has been known about how teachers perceive the purposes to be served by the children's characteristics in this learning environment. Although innovation and change have never been wholly absent from the early years of schooling and many individual schools had a distinctiveness, generally schools tended to be much more alike than is the case now (Antiseri, 1985). The purpose of the activities which went on there was readily recognizable and, probably generally approved. It was evident that teachers were mostly concerned with competence in a relatively restricted range of skills related to the 3 its'. This was generally coupled with a minimum proficiency in a few fringe activities in the fields of physical education, art, craft and music, and with the clear development of particular moral values. The implementation of this curriculum agenda was conducted within a rather formal framework, without much care being taken to unlocking the will to learn. In fact the three questions which Johnston, 1995, p.47 asks (i.e.)

"What makes learning frustrating for you? "

"How would you teach students to learn? "

"How would you like to show the teacher what you know?" ? "

were almost certainly ignored.

In the last ten years, not only has there been a general change in the content and style of elementary education, but a wide variety of practices exists within different schools (Laeng, 1995). This is reinforced through a national policy in elementary education which assigns three teachers for every two primary classes (each teacher is in charge of one of the three major curricular areas, i.e., a. Mathematics and Science, b. Italian Language and Visual Arts, c. History, Geography and Social Studies). The purposes of these new practices are much more difficult to infer and there is certainly less agreement about their value. Whatever the origins of these changes, obviously it has been teachers (now working in teams) who have put them into operation (Clarizio, 1996). Thus one vital element in the debate and sometimes near-controversy about elementary education in Italy must be surely an understanding of the way the developing population learns (Gallegati and Tinelli, 1994). In the present climate of change and innovation in elementary schools, and indeed, the changing societal context of education, it seems essential that teachers should "reflect" upon their methodology and upon the way pupils learn in school, in order to examine them and thus use them consciously as a means to rational choice of actual practices (Foresi, 1996)

The Project

The task of the project was hence first to involve teachers of Italian elementary schools in discovering their own learning personal combination using the Learning Combination Inventory (LCI) and secondly to apply the LCI to a sample of elementary school age children (n=320; 185 males and 115 females) with the clear objective of giving feedback to teachers on the learning combination of their individual pupils. The whole exercise was worked as a co-operative venture between teachers who are members of the Association of Elementary Catholic teachers, i.e. the only elementary professional teacher association in Italy (AIMC), and the project team which comprised the author and the research unit of the AIMC based in Rome. Three regional discussion groups of elementary teachers worked closely with the project throughout its existence and two mayor seminars were held in Rome in June 1995 and in February 1996. The whole problem of translating the LCI was worked out with them. The objective was, stage by stage, to increase the clarity and focus of the LCI statements within the Italian context, while retaining the characteristics of the LCI rationale. The final product was a clear translation of the instrument, with minor modifications for the teachers' sample (both on the quantitative and qualitative side) though the use was unequivocally restricted to qualitative improvement. The original LCI [as developed by Johnston (1995) but in translation] was administered to the pupils in the sample.

As described above, the project had to find its way and work through successive experiences in this peculiarly difficult and certainly uncharted area of teachers' reflections and pupil learning. But the result is a statement about how teachers reflection and pupil characteristics can be harnessed to inform school reform. It is recognised to be an initial exploration and one which has thrown up many problems and conflicts, and points to numerous areas which need much further examination.

As the discussion with teachers progressed, it became clear that conceptions of learner characteristics were related to other important issues. These were explored in a preliminary conference held in Rome (June 1995). It was clear that the aims to which individual teachers subscribed to the LCI would be limited to their fundamental beliefs about the whole purpose of education - in whether they perceived the LCI as something concerned with developing individual talents and interest or equipping children (or themselves) with skills and attitudes appropriate to the schemata developed by Johnston

(1995). Not surprisingly, the teachers' varying perceptions of their role seemed to relate to what they had to say about the LCI. If, for example (as they did), some teachers stress the values pertaining to the Precise Processor as a characteristic of children's behaviour and others stress assurance and initiative, then it is reasonable hypothesis that these different teachers choose to teach in different ways. This issue, was, with the help of teachers, focused on by the project team.

Initial Debate

Perhaps the most stoking aspect of the results of the national sample was the widespread consistency of teachers' opinions on these various issues. Italian teachers' views about the fundamental purpose of reform in elementary education, the aspects of development they thought primary schools should most concern themselves with, the aims they stressed and the teacher's role and methodology they thought best (AIMC, 1995), all fitted together in an intuitively logical pattern supporting the use of the LCI. In fact Petter's (1995) notions of the "image of childhood" in Italian elementary school reform was noted and was observable in most of the discussion that took place in the seminars referred to above. Petter (1995, p.38-39) states that

1. *the child arrives at school with a series of knowledge, behaviours, values that he/she has developed (and will continue to develop) through the actions and experiences that the child has had within the family and in his surroundings, though largely influenced by the mass-media.*
2. *the child has the right to significant motivating experiences which will help him/her to achieve his/her right to experience understanding.*
3. *the child is motivated to discover doing and to develop his operational behaviour to the maximum extent possible.*
4. *the child aspires to achieve autonomy, which he/she will reach gradually. This autonomy implies a development in knowledge in the same manner that other children learn and at the same time the concrete opportunity of developing knowledge in a diverse individualized manner.*

Objectives of the Study

The study had two purposes. First, to discover the potential use of the LCI outside the North American, anglo-saxon context of education, and to examine the areas of consensus and divergence between individual learner characteristics in a sample of Italian elementary schools. Second, in developing the LCI into a learners' guide where school reform can be truly governed by learners' needs and characteristics.

Choice of Strategy

In order to survey the LCI on any acceptable scale, three school sites (three Italian Regions: Lombardy, Lazio and Abruzzo, i.e., North, Central and South Italy) volunteered to take part in this stage. This gave the sample the following composition.

**FULL SAMPLE COMPOSITION:
44 ELEMENTARY SCHOOL TEACHERS.**

320 CHILDREN AGES 8-11

Participating Schools

The schools conformed closely to the national proportions of type, population size and socio-economic areas. They were located in the range of geographical and urban/rural regions identified above. The most commonly occurring school in the sample had between 220-300 on roll, 18-20 teachers on the staff and class sizes between 20-28 children. About half the schools were at least partly vertically grouped; team teaching was part of daily school life. Only one school adopted a style of streaming abilities.

Teachers' Sample

These men and women teachers varied in respect of age, length of experience, position in school, age group taught, area of teaching and type of school. They had in common only that they were all teaching the children within the sample. All 44 teachers completed the LCI, including the open-ended questions attached to it. These last statements were not subjected to rigorous analysis but were examined for general characteristics which would inform subsequent work on eliciting relationships to the four categories within the LCI. Four characteristics were considered clearly apparent and relevant:

1. Very wide scope and a high level of generality were found in the majority of the answer statements. That, on average, the respondents found it possible to answer the same questions with broad generalizations are no doubt valid indications of the multiple use which is made of the sequential, precise, technical and confluent processor by the teachers themselves.
2. The statements were categorized on a simple basis of similarity of content. The distribution of the statements between categories was very regular. Yet, 73% of the statements fell into only three categories and the remaining 27% were attributed to the technical processor. Specifically, the majority of teachers made one statement in each of the categories and the rest were extremely varied. This would suggest that these are the three areas of high consensus and after these there is a considerable variety of processing".
3. Statements were open-ended. Common phrases were "as far as possible", "to the utmost", "in as many ways as possible". It may well be that such phrases were not masks for uncertainty or lack of clarity but accurately reflected the kinds of processing" the teachers thought appropriate for primary education.
4. There was a clear relationship between the first question: "What makes assignments frustrating for you?" and "If I were the teacher, I would have pupils learn by....". 85% of the respondents built the latter answer on the previous assumption. For example, *Technical* and *Confluent Processors* used words like "foster", "encourage" and "stimulate" implying a close relationship between the teacher's current philosophy of elementary education (as identified by Petter) and the processing abilities.

Teachers' Role and the LCI

The role of the elementary teacher in Italy has changed considerably in recent years. Fiorin (1994) graphically describes the dimensions of these changes in writing about innovation in the elementary school. Dell'Aquila (1995) observes the same kinds of changes in

describing modern elementary education for the benefit of parents and others who are non-teachers. Baraldi and Trovato (1996) make more formal reference to changes in the role of the teacher. The sources of influence upon the teachers' role and the pressures towards change are usefully overviewed by Gritti and Marchesi 1995), The important implication of this review is that each individual teacher is subject to a personal combination of influences, which are modified by his/her own perception of them and his/her reaction to them.

It is a matter of common observation that teachers do execute their role in different ways. Discussions with participating teachers by the project team suggested that there are three particular areas of difference: these relate to the rationale of implementing curriculum content, to the chosen nature of children's participation in learning and to the teacher's task in promoting learning. A careful analysis of the LCI suggests that there are different statements within the LCI that contain a reference to curriculum content, the children's part in the learning process and the teachers task. The differences of statements illustrating the four categories can be commonly described as varying along a "traditional-progressive continuum". These labels were adopted as convenient abbreviations within which the processors could be integrated. They were used purely descriptively and not evaluatively. "Traditional" is taken to refer to a long-established role style, "progressive" to a more recently developed style conforming to Petter's intuitions.

Discussion

Teachers who promoted a more "traditional" style, i.e., a style which favours a body of knowledge and skills that are best taught in logical progression, and most economically to groups of children of roughly equal ability in a quiet orderly atmosphere, scored highly on the *Sequential* and *Precise Processors*. Many of these teachers acknowledge that they have full knowledge of what they want their children to know, and felt capable, by analysis and experience, of presenting it to them interestingly in as well-programmed a manner as possible, and to set the pace of learning.

On the other hand, teachers who favoured the progressive role, expressed an opinion that children learn better when involved in individual work that absorbs them and this is fostered by giving children as much freedom of choice as possible in what they learn, when and how. They saw the teacher's task as one which provides stimulating opportunities to learn and practice the basic language and number skills to have the tools to use in their self-chosen inquiries. A number of teachers within this category also affirmed that learning takes place most effectively when children are involved in individual inquiries of their own choice; thus the children's interests and needs as they arise constitute the curriculum. Teachers within this category felt that the teacher's task is to create a psychological environment in which inquiry can arise and a physical environment rich and stimulating enough to enable it to be pursued successfully at the child's own pace. Invariably, and with few exceptions, individual teachers pertaining to this point of view had scale scores on the LCI indicating technical and/or confluent processors.

Teachers' Sample (n=44)

ROLE F	s%	P%	T%	C%
TRADITIONAL (n=29)	42.9	38.3	5.6	11.2
PROGRESSIVE (n=15)	2.3	5.8	41.8	50.1

(s= sequential; p=precise; t=tecnrical; c=confluent)

It is to be noted that sub-groups involving biographical composition -- i.e., sex, age, experience, years in school, and professional qualifications are not being reported in this paper but were closely monitored by the project team and findings in this sphere will be

reported elsewhere. It will suffice for the purpose of this paper to state that the older, more experienced and those who had served for longer in their present school agreed significantly more often with the traditional mode and amassed around the *technical* and *precise processors*. The young, the less experienced and those with shorter service in their present school, however, emerged as significantly more in favour for a progressive approach and clustered around the *Confluent/Technical* pole. Women were distinguished by their agreement with the 'new' progressive role. Clearly, men appear to be more traditional and women more progressive in their approaches to teaching. Nevertheless, it can be suggested that there exists a closer relationship between progressive/traditional roles and their *Sequential/Precise* or *Technical/Confluent* processors than through sex differences in belonging to either processes or role.

The whole picture can now be drawn together in the shape of a summary. Those teachers who considered that the broad purpose of elementary education is to equip children with skills and attitudes, which will enable them to fit effectively and competently into society, tended to choose to work in a more traditional teacher directed manner with the accent on the acquisition of basic skills and knowledge to specified levels of achievement. The same teachers were almost certainly found to prefer an individual processor within the *sequential/precise* realm. Those teachers who considered that the broad purpose of elementary education is to develop children's independence and individuality, enabling them to discover their own talents and interests and to arrive at their own enjoyment and attitudes towards society were markedly inclined to favour a more progressive, child-centred manner with the accent on inquiry and the acquisition of the basic skills as the children require them and at their own pace. The latter group were unmistakably the source of the *technical/confluent* individual teacher paradigm. The former group tended to be older, more experienced, more established, and the latter tended to be the younger, less experienced, but with higher qualifications in education.

These findings are intuitively acceptable in that they create two meaningful consistent and coherent pictures of education, its purposes and methods. Over-simplification of these important issues should be avoided; nevertheless, these findings appear to suggest strongly that the suspected difference of learning processing amongst individual teachers may be real and is possibly fundamental in elementary education.

The Pupil Sample and the LCI

Three hundred and twenty (320) pupils were administered the LCI, of which 185 were males. All pupils were aged between 8 and 11. Twenty-four children were considered to be non-readers or had reading difficulties. Administration of the LCI to the latter group followed the requisite instructions set by Johnston and Dainton (1995). The LCI was administered in all schools on the same day. During the data analysis, which was done centrally, only the first clear choice of the processor tumblers was acknowledged. This meant that although 17 pupils showed a conflicting placement within the four processing tumblers, their primary and most predominant bias was accepted and reported as their main processor.

Pupil sample: 320 (age 8-11)		
sequential processor	53	16.6%
precise processor	49	15.3%
confluent processor	146	45.6%
technical processor	72	22.5%

Final Discussion

Analysis of the written expressions were mostly representative and supportive of the four learning schema. Similarities in words, meaning and intent could be clearly identified, especially with the *Confluent* and *Technical Processors*. Such phrases as "I like to be creative and artistic", "I like making up my own stories with pictures and puppets", "I need more respect for my own ideas both in writing and in speaking" were clear indications of the bias expressed by children in the sample towards the *Confluent Processor*. Children in the "*Technical*" processing tumbler emphasised the 'learning by doing' strategy. In this area, one common comment was: "let me show the teacher that I have learnt by evaluating my progress through my actions". Another comment was: "let me learn the way I want to learn not the way the teacher thinks I need to learn". Quizzes and oral tests were greatly appreciated by pupils who preferred a *Precise* processing tumbler. In fact these pupils were very much in favour of being asked oral questions (which are the main modes of assessment in education in Italy).

Pupils classified in the *Sequential* processor tumbler appeared to be in difficulties in their schooling. From their comments it transpired that most were not doing well in class. Their comments inferred personal comparison with their peers. They relayed messages that hinted at frustration and boredom in their daily school life. This was attributed to the fact that their teachers were different from what they 'expected' them to be, for example, "too free", "too open", "less orderly".

Conclusions:

Building on Arcuri's (1985), Pontecorvo and Pontecorvo's (1986) and Johnston's (1995) assumptions that learning how to learn enhances the pupil's overall success in learning, the project team decided to apply the knowledge gained from the two samples (teachers and pupils) to a whole-school inset programme. The approach has evolved from the one advocated by Redding (1990) -- i.e.,

1. *educating pupils and teachers in what promotes or obstructs individual learning;*
2. *enabling pupils and teachers in recognizing and developing their learning strengths;*
3. *educating pupils and teachers in their specific learning strategies;*
4. *sharing the responsibility of learning between pupil and teacher.*

The end goal of the process is the development of learning, in which reform the change agents include both teachers and pupils. A number of whole-school INSET days have been organised in the participating schools. The main themes of these revolved around joint "exercises" focusing on learning strategies and involving both pupils and teachers. The process capitalizes on the notion of lifelong education, in which the learner never stops learning. This also implies a philosophy of responsibility towards learning which is shared between the teacher/learner and the learner/learner. In the last project seminar held in Rome in February 1996, teachers and pupils could effectively confirm Glickman's (1991) assertions that teachers need to think about how students think, listen to them describe what helps them learn, and create in collegiality activities and methods that get closer to active learning (in the manner in which the students describe they learn).

Both sets of "learners" confirmed that in-house school reform was being shaped by their critical awareness of the data elicited through the LCI. One concrete example is the way new in-school profiles for evaluation were drawn up with the four processing tumblers in mind (AIMC, 1996). This will also equip participating schools with a research kit enabling them to evaluate the longitudinal development of individual pupil/teacher learning styles. The next stage of the project has been the setting up of inset which includes parents in the process of 'learning on learning styles'. The target goal of this extension to the initial project is to consolidate a learning pedagogy which provides opportunities for "learners" to

develop recognition of individual learning combinations that are fundamental to competent interactive self-reflection.

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