The Irish Journal of Education, 2004, *xxxv,* pp. 5-19.

TEACHING AND LEARNING IN MULTIGRADE CLASSROOMS: WHAT TEACHERS SAY

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This paper presents the results of an exploratory study which examined the perceptions and beliefs of 75 teachers regarding four-grade multigrade classes in two-teacher schools. The study investigated the degree to which positive and negative perceptions of the multigrade setting which had been identified in research elsewhere were common in the Irish context. Findings were similar to those of previous studies for the most part. However, Irish teachers identified considerably more positive features of multigrade teaching.

A very large proportion of primary-level teachers throughout the world work in classes in which two or more grade levels together in one room are taught by one teacher. Unfortunately, statistics on the incidence of multigrade teaching are not routinely collected by educational administrators in many countries or by international agencies such as UNESCO (Little, 2001). However, the available data indicate that in Europe the incidence of such teaching, where up to 53% of pupils in primary schools are in multigrade classes, is quite high (Mulryan-Kyne, 2003). Multigrade classes are also common elsewhere, except in the USA (Mason & Stimson, 1996).

Two-grade multigrade classes, while present in some small schools, are frequently found in large, predominantly single-grade, primary schools. On the other hand, classes with three or more grade levels are usually located in small schools in areas of low population density, mainly in rural areas. The teaching and learning context in two-grade classes and multiple-grade classes appears to be different enough to justify the use of different terminology to describe them. Mason and Burns (1996) use the term 'combination class' to describe two-grade multigrade classes. In Ireland, the term 'consecutive grade class' is used to designate classes of this type.

Multigrade and consecutive grade classes are an important feature of primary schooling in Ireland, where classes are divided into three categories: single grade, consecutive grade, and multigrade. Consecutive-grade classes are usually found in large schools, which are predominantly single-grade, and are formed for administrative reasons (e.g., fluctuating pupil numbers). Multigrade classes are found mostly in 1-, 2-, and 3-teacher schools, most of which are located in rural areas. In the school year 2002-2003, 61.74% of pupils were in single-grade

classes, 26.8% in consecutive-grade classes, and 11.46% in multigrade classes (DES, 2004, Table 2.7).

An important approach in understanding what teachers do in classrooms and why they do it is to examine their perceptions of, and beliefs about, teaching and learning (Nespor, 1987; Stipek, Givvin, Salmon, & MacGyvers, 2001), which we might expect to be influenced to a considerable degree by the context in which they find themselves (Clark & Peterson, 1986; Fang, 1996; Kagan, 1992). It seems reasonable to assume that information about such beliefs could facilitate theory building, model building, and experimentation, as well as providing important understandings about teaching practices in multigrade classrooms (Leinhardt, 1990).

Studies of teachers' perceptions and beliefs about multigrade teaching and learning have been carried out across a range of contexts in Canada (e.g., Brown & Martin, 1989; Campbell, 1993; Cross, 1987; Daniel, 1988; Gayfer, 1991; Perras, 1983; Waraksa, 1989), the USA (e.g., Galluzzo et al, 1990; Marzolf, 1978; Walsh, 1989), Australia (Pratt & Treacy, 1986); the Netherlands (e.g., Nederland, Inspectie Basisonderwijs, 1978; Veenman, Lem, & Winkelmolen, 1985), and Switzerland (e.g., Casparis, Bernhard, & Heuberger, 1981; Mayer, 1981; Poglia & Strittmatter, 1983). They show considerable agreement in their findings. Most teachers describe teaching in this setting as very difficult and less satisfying than teaching in a single-grade setting (e.g., Cross, 1997; Veenman, 1995), and, if given the choice, would prefer teaching in a single-grade classroom (Brown & Martin, 1989; Galluzzo et al., 1990; Gayfer, 1991). Marzolf (1978) found that most teachers had a negative attitude to multigrade teaching because of the heavy burden it placed on them, and because they believed that pupils received an inferior education.

Most teachers consider that multigrade teaching involves more planning, preparation, and organization than single-grade teaching (Brown & Martin, 1989; Perras, 1983; Pratt & Treacy, 1996) if for no other reason than it has to cater for a wider range of ability and maturity levels than most single-grade teaching. Unnecessary repetition for children, particularly in science and social studies, and insufficient time for oral instruction, are of concern to many teachers (Cross, 1987). Multigrade classes are also reported to be characterized by frequent interruptions, relatively high off-task time and disruptive behaviour (Galluzzo et al., 1990; Veenman, 1995). Insufficient time for the adequate teaching of some subjects, for reteaching, for the preparation of class materials, for the marking of tests, for feedback, and for individual attention and remediation is considered by many teachers to create difficulties (Cross, 1987; Galluzzo et al, 1990; Gayfer, 1991; Pratt & Treacy, 1986). The difficulty of

teaching two or more programmes in the time that is available to single-grade teachers for the teaching of one programme is also a frequent concern of teachers. Many teachers cite lack of time to reflect on teaching, lack of relevant professional training, and inadequate materials and resources as further problems (Perras, 1983; Pratt & Treacy, 1986; Stauber, 1985). Teachers were frequently critical of teacher training courses, claiming that they did not prepare them to teach in a multigrade class (e.g., Pratt & Treacy, 1986), while feelings of neglect, isolation, lack of support and dissatisfaction with the quality of their work were expressed by some (e.g., Perras, 1983; Strauber, 1985). Positive features of multigrade teaching include the opportunities for more social interaction for pupils, for peer tutoring, and for pupils to work independently.

In a recent study, Mulryan-Kyne (2003) investigated the practices of multigrade teachers, teaching four grade levels in 2-teacher schools in Ireland. The study is of interest since most previous studies focused on two-grade multigrade classes (Mason & Burns, 1997; Veenman, 1995, 1996). Teachers in the Irish study used a wide range of teaching approaches within and across subject areas. They taught all grade levels together, two grade levels together, and grade levels separately across and within subject areas. They sometimes grouped children across grade levels for instruction and also used paired-group seatwork, cross-age tutoring, and peer tutoring. No one approach was used exclusively in any subject area. As in studies elsewhere, teachers tended to teach each grade separately for the basic subjects and combined grades for other subjects (e.g., Mason & Burns, 1997; Veenman, 1995). However, teachers in Mulryan-Kyne's study used a variety of approaches across all subject areas even though one approach tended to dominate in most areas. As was found in previous research, pupils spent a large part of the school day working alone on seatwork tasks. Given the relationship between teachers' beliefs and attitudes and their teaching practices, the study described in this paper set out to investigate to what degree the beliefs and perceptions of teachers differed from, or were similar to, those of teachers in studies carried out elsewhere.

METHOD

Sample

Although multigrade classes with three or more grade levels are found in schools in Ireland, the focus in this study was on 2-teacher multigrade schools for the following reasons. First, 2-teacher multigrade schools are more common than 1- or 3-teacher schools. Secondly, 2-teacher schools provide a context in which the similarity between grade configurations within classes could facilitate

useful comparisons, while the relative homogeneity of grade distribution within classes would make generalizations more valid. Thirdly, since teachers in 1-teacher schools generally teach eight grade levels and 3-teacher schools generally have a combination of 2- and 3-grade classes, collection and interpretation of data would be difficult. Teachers in most 2-teacher schools teach four grade levels, either at the junior or the senior level of the school.

A list of all 2-teacher schools was obtained from the Department of Education and Science. Schools on the list were numbered in order, and computer-generated random numbers within the range of the numbered schools were used to select 76 schools. Schools corresponding to the random numbers were selected for the study. The random sample of 76 2-teacher schools, which was eventually obtained, represented schools from almost every one of the 26 counties in the Republic of Ireland. Both teachers in each school (the school principal and the class teacher) were included in the sample giving a total sample of 152 teachers.

Procedure

Data were collected by means of a postal questionnaire. An introductory letter, in which teachers were given information about the purpose and context of the study and their co-operation sought, was sent to schools one month prior to the circulation of the questionnaire. The principal and class teacher were requested to fill out a questionnaire. Three school principals indicated that their schools had recently become 3-teacher schools. These schools were removed from the sample but were not replaced. Responses were obtained from 56% of the surveyed schools. In the case of seven schools, only the school principal responded. It is possible that teachers in these schools were not informed by their principals about the survey or perceived that the principal could provide the requested information. Separate correspondence to principals and class teachers might have increased participation. Overall, 41 principals (56%) and 34 class teachers (47%) responded.

Most (86 %) of the principals and class teachers were aged between 31 and 60 years. Most principals (73%) and teachers (94%) were female. Most teachers and principals (73%) had been teaching for between 11 and 35 years; 14% had been teaching for less than 11 years; and 8% had been teaching between 36 and 40 years. Most principals and class teachers had substantial teaching experience in the multigrade setting. Fifty–seven percent had some single-grade teaching experience. Most school principals (81%) taught at the senior end of the multigrade school, usually in grades 3 through 6. Most class teachers (79%) taught at the junior end of the school, taking children up to grade 2.

Sixty-one percent of the schools had enrolments of between 31 and 45 children. Twelve percent had between 12 and 20; 22% between 21 and 30; and 5% between 46 and 56. Classes at senior level were generally larger than classes at junior level. Within individual classes, the number of children at each grade level varied a lot. Most grade-level groups (74%) consisted of between 2 and 6 children. Five percent had only one child, and 14% between 7 and 11 children.

Instrument

A 29-item questionnaire was distributed to class teachers and principals. The first part of the questionnaire sought personal information and information about schools and classes. Subsequent questions focused on the instructional practices of teachers across all subject areas. Findings based on these questions are reported elsewhere (Mulryan-Kyne, 2003). Two questions related to teachers' perceptions and beliefs. Teachers were asked to list what they perceived to be the advantages and opportunities and the disadvantages and challenges provided by the multigrade setting. Analysis of these data proceeded in two phases. The first involved the examination of responses to determine response categories; the second involved a re-examination and subsequent categorization of responses.

RESULTS

Results are presented in the form of teachers' responses to questions about the advantages/opportunities and disadvantages/challenges they perceived to be associated with the multigrade setting. The figure in parentheses after each statement is the percentage of teachers who made the statement.

Advantages and Opportunities

Academic Advantages for Children

(i) Low-achieving children gain in the multigrade setting (39%). In the view of 2 out of 5 teachers, the multigrade setting provides low-achieving children with more continuity than would be possible in the single-grade setting. Smaller class were perceived as enabling teachers to detect learning difficulties more expediently and to provide earlier intervention than is normally possible in single-grade classes. The multigrade setting was also considered to afford low-achieving children the opportunity to hear material from more junior grade levels being repeated from year to year, which could provide them with opportunities to consolidate their learning and/or engage with material that they may have failed to learn in earlier years. In cases where grade retention becomes necessary in multigrade classes, the impact on the pupil can be less negative as

the child is able to remain in the same classroom as his/her friends. Low-achieving children may also gain from across-grade grouping.

(ii) Younger children gain in the multigrade setting (32%). Teachers reported that in multigrade classes younger children 'absorb' knowledge from older children as the older children are being taught at their own grade level. This 'learning up', as one teacher called it, can be helpful to children when they themselves come to study this content in later grades. It is particularly beneficial for higher achieving children. Older children also serve as role models for younger children, who can observe their written work, listen to their responses, and witness their application to their work. Teachers reported that entry grade (i.e., junior infants) children settle into the routines of school more quickly in multigrade than in single-grade classes because older children model expected school behaviours for them. Sharing the class with older pupils, often siblings, was also considered to give younger children a sense of security. Many teachers said that older children tended to be understanding and supportive of younger children, taking care of them and assisting them both in the classroom and in the playground.

(iii) Older children gain in the multigrade setting (27%). Older children, according to some teachers, can gain from the 'constant revision' that goes on in multigrade classes. Content that the teacher is presenting for the first time to one grade level is likely to be content that other grade levels have dealt with previously. Although pupils at more senior grade levels may not be the main targets of this instruction, they are likely to 'tune in' from time to time and thus revisit the content being taught. This, according to some teachers, consolidates learning and aids retention. Some teachers suggest that being in a class with younger children encourages older children to work hard in order to ensure that they stay ahead of the younger ones. Furthermore, older children gain in confidence and can develop leadership skills from helping younger children.

(iv) Children become more independent (19%). The multigrade setting encourages the development of independent learning skills. To work successfully in the multigrade setting, according to some teachers, children must develop effective study, research, and organizational skills, and must learn to take the initiative in making decisions about their curriculum and work practices.

(v) High achievers gain in the multigrade setting (16%). Some teachers considered the multigrade setting to be particularly beneficial and challenging for high achieving children. Younger ones can be stimulated by the work of older children and can pick up some of what is taught to more senior grade levels. Across-grade grouping can be used to challenge high achieving children. At

junior grade levels, according to some teachers, they can aspire to the level of senior classes and challenge themselves more than they would in a single-grade class. Given that children in multigrade classes must work independently without direct teacher attention for a large part of class time, considerable scope may be available to higher achieving children to extend themselves beyond the basic curriculum with teacher support.

Advantages for Teachers

(i) Multigrade teaching has positive effects on teaching and learning (32%). In the view of many teachers, the multigrade setting is a stimulating and interesting setting in which to work. Variety of work and an atmosphere that is generally busy and productive are some of the positive features of multigrade classes mentioned by teachers. The fact that pupils stay in the same class for up to four years facilitates continuity, and considerable flexibility exists in relation to the coverage of the curriculum. Teachers indicated that they do not feel the need to cover the whole of each grade programme each year. Rather, the programme can be perceived as a four-year one.

Due to the relatively small size of multigrade classes, a greater range of methodologies is possible. For example, the multigrade setting provides greater opportunities for small-group work, including project work. Resources can be shared across grades, and considerable instructional benefit can be gained from even a small amount of resources due to the smaller number of pupils. The smaller class numbers also facilitate the monitoring of children's work and development. According to one teacher, class discussion in multigrade classes can be very productive and interesting for all, given the range of grade levels in the class. Discipline is rarely a problem and disciplinary strategies can be more informal and responsive to individual needs.

(ii) Teachers find multigrade teaching satisfying and fulfilling (17%). Some teachers said that they enjoyed working in the multigrade setting and found it to be personally fulfilling. The variety of work, the busy work atmosphere, the opportunity to teach at a range of levels, the wide scope of teaching and learning, and continuity across the years were cited as positive features. In the view of some teachers, the teacher has a greater opportunity to exercise his/her creativity, flair, and enthusiasm and to experiment with new methods and content.

Some teachers mentioned the opportunity to observe pupil progress and development over a number of years as an immensely rewarding aspect of multigrade teaching. Seeing a child begin school as an infant and progress over a four-year period was regarded as a very satisfying experience. Watching a timid

child 'blossom' over a few years or an academically weak child improve were other positive experiences mentioned by teachers.

Social Advantages

(i) Teachers get to know children better (37%). According to many teachers, multigrade teachers get to know pupils and their families very well. Teachers find it easier to monitor pupils' progress, and the continuity that is possible over a number of years makes it more likely that pupils' needs will be met. Pupils also get to know each other very well. Only a few pupils join the class every year, and these are quickly integrated.

(ii) Multigrade classes have a positive family atmosphere (32%). Some teachers described the multigrade schools as 'home-like' places in which children thrive and develop in a healthy and balanced way. The class was described as a family-friendly close-knit group, and as an extended family. The family atmosphere is helped somewhat by the fact that a child may have one or more siblings and/or close relations in his/her class. Teachers and pupils, according to teachers, are more relaxed and 'at home' than they would be in a large single-grade class. Pupils have no fears about moving to a new grade level.

(iii) Children learn from interacting with one another (32%). Multigrade teaching is good for childrens' social development, according to many teachers. Children learn to co-operate and get along with one another as they interact in the playground and classroom and share learning experiences. Older children learn to be patient and tolerant of younger children, and younger children benefit from their interaction with older children in a myriad of ways. Children leave school feeling confident and fulfilled.

Disadvantages and Challenges

Time

(i) Insufficient time (70%). Most teachers were concerned that they did not have sufficient time to spend with each grade level in each subject area. Teaching four programmes in the time allotted to single-grade teachers to teach one programme was considered a significant problem by almost half of the teachers. Whereas a relatively small amount of content could be taught to all grades together, and some content could be taught to two grade levels together, there still remained a significant amount of content to be taught to each grade separately, especially in reading and mathematics. In this situation, some subjects, often in the expressive arts and social environmental and science education (SPHE), had to be 'squeezed out' to ensure that basic skills in reading

and mathematics were adequately covered. Many teachers expressed frustration at having to do this. Some found it difficult to deal with content in depth because of time pressures and curriculum overload. Covering the full mathematics programme for the senior grade levels presented particular problems for teachers, and sometimes gaps were inevitable.

Teachers were concerned about the lack of time available, especially in the junior grades, to work with individuals. Providing remedial instruction for low-achieving pupils presented considerable difficulty for many. Teachers found it difficult to find the time to monitor the work of pupils during independent seatwork and to provide feedback to them. At junior level, it was particularly difficult to manage time at the beginning of the school year, given the need to help new pupils settle in. Throughout the year, the youngest pupils in these classes demanded a disproportionate amount of the teacher's time. School principals experienced particular problems relating to time because of their administrative responsibilities.

Organization and Instruction

(i) The quality of teaching and learning is compromised (48%). Keeping all grade levels on task throughout the school day was a difficulty mentioned by several teachers. Some expressed difficulty in finding sufficient variety in some subject areas (e.g., expressive arts) across a four-year period and in avoiding repetitions and omissions. Some teachers found the variety in age and maturity in their class to be too wide to make the teaching of all, or even two, grades together in most subject areas feasible. Organizing the class for instruction and ensuring the suitability of lesson content for a range of grade levels and abilities were regarded as extremely difficult tasks by many teachers. According to some teachers, pupils in multigrade classes get poorer overall instruction than pupils in single-grade classes.

Teachers found it more difficult to facilitate children's work with manipulative materials and their engagement in collaborative small-group work because of the noise level associated with such work. Oral work and pupil activity can also be neglected in the teacher's attempts to cover curriculum content with several grade levels in a limited amount of time. Individual seatwork tended to predominate as a way of keeping pupils engaged while the teacher worked with other groups. Some concern was expressed about the limited pool of expertise that exists when only two teachers are available to pupils during their primary school years. For example, as suggested by one teacher, if neither teacher is well qualified to teach physical education, the visual arts, or music, this can put pupils at a disadvantage. Furthermore, children may

get 'tired' of the same teacher over a number of years. Particular difficulties may arise for pupils and teachers who have difficulty relating to one another.
(ii) More organization and planning is needed (39%). Teachers complained about the 'excessive amount of preparation' that is needed for the teaching of four grade levels, and the large amount of paperwork that is demanded of them. One teacher expressed great concern about 'the theft of my teaching time in the classroom to fill out more and more paperwork, and the erosion of my time with the children.'
(iii) Children are losing out (39%). Some teachers believed that older children are disadvantaged, both academically and socially, by having to share their teacher with younger children. In one teacher's view, the youngest children in the junior-level class present a major distraction for the older children. Other teachers expressed the view that weaker children lose out because of the difficulty teachers have in finding time to give them the extra attention that they need. Furthermore, children often have to work on their own for extended periods and do not have sufficient interaction with their teacher.

Spending four years with the same class teacher was regarded by some teachers as a potentially negative feature of multigrade teaching. Some teachers perceived children from small multigrade schools to be disadvantaged when they go on to second-level education, suggesting that children can feel overwhelmed and lost in the relatively large school and classes of the secondary school and that they may have adjustment problems.
(iii) Multigrade teaching is associated with disciplinary and classroom management problems (32%). Some teachers reported experiencing management and disciplinary problems in multigrade classes. Keeping all children occupied throughout the day and monitoring the class at all times presented a particular challenge. The behaviour of one unruly child, according to teachers, can have a much more disruptive effect in a multigrade class than it would in a single-grade class. If a child does have a behavioural problem that is difficult to handle, the teacher has to deal with it over a four-year period and this can be trying.
(iv) Class sizes are too large (12%). According to some teachers, large class sizes make groupwork and activity-based work virtually impossible. Teachers considered it impossible to teach multigrade classes effectively with more than 15 pupils.

Resources and Support
(i) The resources and support for multigrade teaching are inadequate (33%). Teachers complained about lack of support and lack of resources for multigrade teaching. They were dissatisfied with their level of access to support services for

children with special needs and for children in need of special support. Most schools shared a learning support teacher with a number of other schools, and this was regarded as unsatisfactory. Lack of time for consultation by staff with the specialist teacher, who was also under considerable pressure, was regarded as a particular weakness of special needs provision for multigrade schools.

Lack of space was cited by a number of teachers as presenting particular difficulties. Many multigrade schools had limited or no physical education facilities; space for group work and activities involving the use of concrete materials was very limited, and there was no designated space for the learning support teacher. Some teachers considered that their classroom was totally unsuited for the effective implementation of the revised curriculum, which puts considerable emphasis on group work and pupil activity. Lack of space for the storage of equipment and of separate facilities for staff (i.e., staff room, toilets) was considered unacceptable.

Many teachers were unhappy with the support that they received from the primary school inspectorate. They felt that inspectors did not understand the difficulties that teachers were experiencing and that their advice was not beneficial. One particular need identified was for inspectors to make suggestions as to how they might 'pick and choose and plan' curriculum content for their multigrade classes.

(ii) Teacher preparation was inadequate (21%). Some teachers criticized colleges of education for failing to prepare them adequately for multigrade teaching. In particular, they were critical of the fact that most teachers had no experience in multigrade classes during their programme of studies. They were also critical of inservice courses which, they maintained, were designed with the single-grade setting in mind.

(iii) Textbooks are inadequate (16%). Some teachers were critical of subject textbooks, arguing that they do not cater for the needs of the multigrade teaching situation. If children have bought grade-specific textbooks and workbooks, parents expect all the content in them to be covered. This encourages overdependence on workbooks and textbooks.

(iv) Teachers are isolated (19%). Some teachers considered multigrade teaching to be isolating, both professionally and socially. Multigrade teachers may have very little contact with other adults in the course of their work. Some days they may not have the opportunity to interact with their teaching colleague during the school day because of the need for a teacher to supervise children during break times. The absence of one teacher (e.g., to attend an inservice course or due to illness) leaves his/her colleague with responsibility for every child in the school.

This can result in a teacher continuing to teach while ill and/or avoiding taking inservice days.

(v) Curriculum is overloaded (13%). Some teachers regard the requirements of the revised primary school curriculum (DES/NCCA, 1999) as too great, especially for multigrade classes. Teachers complained of curriculum overload, with eleven subjects to cover across four grade levels. In the view of some, the documents accompanying the revised curriculum do not address the particular context of multigrade teaching. Some teachers believe that the curriculum as presented could not be implemented in the multigrade situation.

CONCLUSION

The findings of this study are similar in many ways to the findings of previous studies. Many of the difficulties of the multigrade setting described in studies carried out elsewhere were also mentioned by Irish teachers. Teachers agreed that teaching in the multigrade setting is different and more difficult than teaching in the single-grade setting. Most teachers cited lack of sufficient time as a major problem and concern. Meeting individual needs, especially those of low-achieving children, and providing individual attention and feedback to all children were concerns of teachers in this study and in previous studies. Other matters on which teachers in the present study and in previous studies agreed include difficulties concerning classroom management, the greater amount of preparation, planning, and administration required, lack of support and appropriate training for multigrade teaching, and professional isolation. Teachers also thought that some children are likely to lose out in the multigrade setting.

Positive features that were mentioned by teachers in previous studies and in the present study include the opportunities that the multigrade setting provides for more social and on-task (e.g., peer tutoring) interaction for pupils and for pupils to work independently. Irish teachers, however, cited more positive features of the multigrade setting than teachers in previous studies, perceiving it as providing a teaching and learning context that is qualitatively better on many dimensions than the single-grade setting. Academic advantages were reported for all pupils and many teachers found the multigrade setting both challenging and satisfying. The multigrade class, according to teachers, provides a wholesome and friendly classroom atmosphere in which the social and emotional development of pupils, as well as their academic progress, is promoted. The continuity of experience for pupils through their primary school years was another positive factor. Overall, while adverting to several problems, teachers in the present study considered the multigrade setting to be one in which

effective teaching and learning can take place and in which the affective dimension of children's development as well as the academic can receive attention.

Such findings raise important questions about the quality of teaching and learning in multigrade classes. Although they provide no evidence of differences between multigrade and single-grade settings in relation to cognitive outcomes, we have only a very limited amount of information about what actually happens in multigrade classes on a day-to-day basis or about the instructional practices of teachers. There is a general acknowledgement that multigrade teaching is more difficult than single-grade teaching. Awareness of some of the difficulties should lead to understanding of why teaching and learning happens the way it does in multigrade classrooms and help to ensure that the positive features associated with it are maximized and the negative features minimized.

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