Self-Assessing of the Emotional Intelligence and Organizational Intelligence in Schools

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Abstract. The paper presents the results of an evaluation of the Emotional Intelligence (EI) and Organisational Intelligence (OI) competences self-assessment tools developed and applied by the IGUANA[1] project. In the paper Emotional Intelligence and Organisational Intelligence competences are discussed, their use in action research experiments to assess and support the development of innovation in schools is presented, together with the results of these experiments. The paper also discusses how innovation support in schools was linked to a 'Theory of Change' approach in the IGUANA project and applied to support innovation plans developed by Portuguese and Lithuanian schools. Finally, the results of the use of the Theory of Change approach are discussed.

Keywords: Iguana, emotional intelligence, organizational intelligence, theory of change, logic map.

1. Introduction

In recent years there has been an increasing interest in educational research, policy and practice on developing 'non-cognitive' competences and capacities in schools, both

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[1] IGUANA is an action-based research project, partially funded by the European Commission under the 'Lifelong Learning Programme', which was successfully implemented during the years 2013–2015 by a consortium composed by the following institutions: A Research Centre of the Portuguese Catholic University (CEP-CEP), Arcola Research in London, Menon Educational Innovation Network in Brussels, Ellinogermaniki Agogi in Greece, Vilnius University Institute of Mathematics and Informatics in Lithuania, Trinity College in Dublin (Ireland), Contour Education Services in Surrey (UK), and the European School Heads association.

at the individual and organisational levels. This trend can be linked to the difficulties most EU member states are continuing to experience in meeting the educational targets set by the EU2020 and the EU Education and Training 2020 strategies (`http://ec.europa.eu/education/policy/strategic-framework/index_en.htm`). In particular, the 'headline' target of reducing the rate of early school leavers to under 10% and achieving a level of at least 40% of the younger generation with a tertiary degree faces a high risk of defaulting. According to the Eurostat figures for 2013, the average EU rate of early school leavers stood at just under 13%, with wide disparities between member states. It is widely recognised that early school leaving is a complex problem that reflects multi-dimensional underlying causes, including family background, socio-economic status and poor motivation. It is also increasingly accepted that the school culture itself has a strong influence on levels of student retention (Rumberger and Palardy, 2005). The evidence suggests that many schools are *stuck* in an educational paradigm that remains rooted in traditional modes of learning that are essentially reproductive rather than transformative (Cullen, 2005; 2013). The wider picture portrays schools that are failing to keep pace with the profound changes that in post-industrial society have eroded the power of the traditional institutions – family, community, school – to support youth in an increasingly fragile world. As the old institutions of industrial society are undermined by globalization, young people must learn to navigate the new 'risk society' for themselves, with little support from increasingly brittle social structures, and in nation states that have restricted welfare provision for young people based either on their age or on their lack of employment history (Giddens, 1999; Lash, 2000).

Against this background, policy-makers and practitioners have been exploring ways of developing both individual and organisational resilience in schools, in tandem with measures aimed at improving academic performance. In the UK, for example, the coalition government's recent White Paper on schools has stressed the importance of building emotional intelligence into teaching practice. As the Secretary of State for Education remarked on the launch of the White Paper: "As a general rule, the smarter an individual is in terms of IQ and EQ, the more opportunity for that person to be a great teacher." The White Paper includes new assessments of 'aptitude, personality and resilience' for candidates seeking to enter the teaching profession (Department for Education, 2010). In turn, although the formal curriculum in the UK does not include specific teaching modules to develop students' emotional intelligence, policies like the 'Every Child Matters' framework (Treasury Department, 2003) places pupil emotional well being as a central concern. The underlying assumption is that the key to economic and social well-being is a positive attitude to and success in learning and emotional intelligence. As well as making good progress, learners need to develop qualities around: self-confidence; independence; flexibility; creative thinking; risk-taking. As Qualter *et al.* (2007, p. 11) put it:

> *The aims included within the various themes of the Every Child Matters Framework exemplify the recognition of a need to develop emotional literacy skills, for example, children and young people should be: mentally and emotionally healthy, safe from bullying and discrim-*

> *ination, safe from crime and anti-social behaviour, achieve personal and social development, develop self-confidence and successfully deal with significant life changes and challenges. All of these aims and more can be linked by the literature to the development of emotional intelligence.*

Although as noted above emotional intelligence is a powerful discourse in education policy and practice, there is little scientific evidence about its impacts and benefits. A review of the literature, which assessed the effects of embedding emotional intelligence in teacher training concluded that "The capacity for emotional intelligence is available to all people from an early age, but the level of its development depends on environmental influences and interaction patterns in the child's social systems" (Sung, 2012, p. 7). An experiment in the United Kingdom, which evaluated the impacts of teacher emotional intelligence training on teaching outcomes showed "linked improvements in terms of emotional intelligence and professional standards " (Pugh, 2008, p. 3). Yet a literature review from Ireland suggests that "There is some evidence to show that leadership and management development programmes have had little effect on the development of leaders' emotional competencies" (McGrogan, 2010, p. 5). However, this review showed, paradoxically, that on the one hand the benefits of emotional intelligence training in schools could be clearly demonstrated – yet these benefits were constrained in practice by organisational resistance within schools, the resistance itself emanating from precisely the deep-seated emotional 'stuckness' that characterises the school culture.

An extensive review of the literature carried out by the University of Bristol for the UK Association of Teachers and Lecturers highlights the inherent ambiguity of emotional intelligence in teaching and learning, seen on the one hand by teachers as 'an important life skill' but viewed on the other as deficient as an 'intellectually rigorous concept' (Claxton, 2008). One key conclusion of this review is that there is a lot of unsubstantiated claims made about the benefits of emotional intelligence training in terms of learning outcomes and school performance. A second, related conclusion, is that many EI training programmes are of little value. However, the review also concludes that there are many aspects of emotional intelligence that can make a positive contribution to better teaching, leadership and governance in schools. A key recommendation of the review is thus to carry out a systematic, critical and sceptical review of the available concepts, approaches, methods and tools. This perspective is reinforced by other research. As Qualter *et al.* (op. cit., p.) observe "There is undoubtedly evidence identifying EI as important in predicting personal and school success, and this has potential implications for both the US and UK children's-related agendas. However, educators need to be cautious in making claims until more research evidence is available from the scientific community."

Similarly, like EI, the need to develop better organisational capacity in schools, figures prominently in discourses around innovative teaching and learning approaches that can be identified in policy initiatives like the UK 2010 Education White Paper. Much of this focuses on developing leadership. On leadership, the White Paper (p. 26) states: "After the quality of teaching, the quality of school leadership is the most important determinant of pupils" success. As we make schools more autonomous, taking up a leader-

ship role will become more attractive and more important." Research clearly highlights the importance of leadership in driving forward change. The evidence suggests that leadership is inspirational in providing clear vision and direction, in raising attainment and accelerating progress, improving the quality of teaching and learning, improving the conditions for learning; and developing the school as a professional learning community (Dougill *et al.*, 2011). However, other aspects of what might be defined as 'organisational intelligence' – for example the capacity of schools to embed learning into their organisational evolution – is poorly developed in the literature.

In this context, IGUANA is a two-year research project funded by the European Commission under the 'Lifelong Learning Programme' (`http://www.iguana-project.eu/`). The main objective of IGUANA is to use an action research approach to work with schools that want to innovate but are experiencing obstacles and resistance to change. It also works with schools who already have Innovation Plans and Change Programmes but want to make them more effective. IGUANA provides a collaborative learning environment in which students, staff and management feel safe and secure to share their ideas, learn from each other and grow. Central to the IGUANA methodology is an exploration of whether developing the emotional intelligence (EI) competencies of school members, in combination with developing the organisational intelligence (OI) capacity of the school has a positive effect in terms of supporting innovation and change in schools. The IGUANA learning environment is comprised of three main elements: two sets of self assessment tools to enable schools and their members to assess their current EI and OI capacities, and the gaps that need to be addressed; one 'Discovery Learning Programme' that provides basic courses in EI and OI and some 'Assignments' to help apply them in practice; an 'Open Learning Space' platform that provides more advanced courses in EI and OI and an on-line space for schools to exchange ideas and experiences through peer review and 'benchlearning'. The model and structure of the learning environment is an attempt to create a 'holding environment' within the organisational structure of the school. This adapts Winnicott's concept of a safe and protective environment to support child development to the organisational context (Winnicott, 1965). In IGUANA, the holding environment is migrated to the group context, becoming a space that is receptive to the birth of new ideas and changes that will eventually stimulate growth and innovation (Kaplan, 1978).

2. Related Reseach

2.1. *Emotional Intelligence and Organisational Intelligence*

The focus of the learning environment in IGUANA is on developing the Emotional Intelligence and Organisational Intelligence of schools and their members.

EI is defined in IGUANA as:

> *a holistic way of looking at, and engaging with the world, a continuous process of self-awareness and self-development*.

OI is defined in IGUANA as:

> *the capacity to make sense of complex situations, apply this sense making to effective action, develop, share and use knowledge and reflect and learn from experience.*

OI can be also considered as a school innovation capacity.

The two assessment tools help schools to identify their current levels of Emotional and Organisational Intelligence, and to identify any gaps in these levels, i.e. whether the levels of EI and OI competences are low as compared to valid benchmarks.

The EI self-assessment tool covers four main EI competence areas, each of which is made up of three specific competences, totalling 12 competences in all. The EI competence framework has been shaped mainly by the research evidence on applying EI tools in occupational psychology and human resource development. It combines 'ability-based' assessment models (Mayer, Caruso and Salovey, 2000) with 'trait-based' models (Bar-On, 2006) to provide an assessment approach that is specifically contextualised for the school environment.

The EI assessment approach used in IGUANA seeks to address a number of deficiencies in EI assessments that have been identified in the literature notably:

(i)   they are inherently reductionist, in that they seek to categorise individuals on the basis of statistical quotients, typically set against the distribution of a larger population of test results;

(ii) they overlap too much with established personality and intelligence tests ;

(iii) they lack the richness of 'indirect' ways of exploring emotional intelligence, like books and stories (Caxton, 2008);

(iv) they emphasise the positive and the successful, rather than exploring ways of coping with 'the impoverished side of life' (Mayer *et al.*, 2012);

(v)   they are typically generic and, though focused on the workplace environment, do not adequately reflect the context in which EI is applied.

To address these issues, the IGUANA methodology for the Emotional Intelligence Self-Assessment tool departs from four design principles: the tool is based on an Emotional Intelligence Competence Framework (EICF); the framework incorporates how EI can be applied within the context of the school; the EI components (v,g, 'traits' and 'abilities') are represented not as questions and rating scales but as 'narrative scenarios' delivered through visual and audio media; these narrative scenarios are supplemented by – optional – 'self-rated tests'.

A competence-based approach to assessing EI offers a number of advantages. It avoids the 'reductionist trap' of trying to map an individual onto an exhaustive and an exclusive set of traits and abilities, the effect of which is to strait-jacket the user into a 'category by numbers'. It provides a bridge between learning, skills and learning outcomes. It acts as an 'open system' that can change and evolve as people, organisations and the external world evolves. In line with this definition, competences are defined in the IGUANA framework as 'practices' that apply knowledge and skills in a particular context, the result of which can be expressed as 'learning outcome examples'. Knowledge and skills are therefore considered in this approach as an open set of changeable

examples rather than a discrete set of immovable structural entities (Valenta, 2012). On this basis, the IGUANA EI competence framework is structured in terms of:

(i)   a set of three Competence Domains (general EI competences; enabling EI competencies in schools; role-specific and advanced EI competences);
(ii) a set of four Competence Areas within these domains;
(iii) a set of three Competences within each Area;
(iv) examples of Learning Outcomes for each competence.

As noted above, there is no established research base on which to build an assessment framework for OI competences. The IGUANA OI assessment framework has therefore drawn on a range of theoretical models mainly from organisational psychodynamic theory (Bion, 1961; Miller, 1993), organisational learning (Argyris and Schön, 1996) and evaluation, with a particular focus on 'theory of change' (Pawson and Tilley, 1997; Weiss, 1995; Sullivan and Stewart, 2006). The OI self-assessment tool covers seven competence areas: normalisation, groupishness, the holding environment, systems orientation, organisational learning, organisational well-being and evaluation.

Both the EI and OI self-assessment tools combine animations, text and rating scales to help users calculate where the school and its members are currently positioned in terms of EI and OI competences. The results produced by using the self-assessment tools can then be used to help both schools and individuals to decide on the most effective way of using the IGUANA learning programme. Because the structure and content of the learning programmes are matched exactly to the 12 EI competencies and the 7 OI competences, schools and their leaders have a clear 'map' that shows them which aspects of the learning programmes they should focus on.

2.2. *Theory of Change*

The evaluation component of the IGUANA learning programme is seen as critical to positive learning reinforcement. The overall aim of embedding an evaluation dimension into the design of the learning programme is to generate iterative feedback loops to support 'double loop learning' within the intervention and within the school enterprise as a whole (Argyris and Schön, op. cit.). Individual and group self-evaluation enables members of the learning group to assess their progress in relation to the new goals set by the programme. To support this, IGUANA applied an organisational development model, including an evaluation methodology, that was based on a 'theory of change' approach (Pawson and Tilley, 1997; Weiss, 1995; Sullivan and Stewart, 2006).

Theory of change seeks to identify the explicit and implicit paradigms of change that underlie specific interventions and programmes. It is the study of the links between activities, outcomes and the context of a programme or an intervention. It involves the specification of an explicit theory of how and why a programme and intervention might cause or have caused an effect. These are expressed as causal pathways and help participants identify whether the methods they have chosen are appropriate relevant and effective. It enables schools to identify and map the presenting problem (*stuckness*) and the theory of action that they think will support them in coming unstuck. This then feeds

into a plan to promote organisational change. The plan provides a logical framework for organisational change that will specify:

(i)   the actions required to operationalize this theory (inputs);
(ii) the expected outputs of the actions;
(iii) the expected outcomes associated with the use of these outputs;
(iv) the longer term impacts;
(v)   how the outcomes and impacts will be measured (Table 1).

The theory of change 'journey' can be plotted at a range of points along the school's 'change journey' – from 'context', through 'inputs' through to 'outputs', then 'outcomes' and finally 'impacts'. Theory of change can be used as a device to assess how far the educational enterprise has progressed in relation to its ultimate goal of 'coming unstuck', i.e. the 'distance travelled'. It can also be used at the individual level to enable a member of the participating learning group to assess her progress in relation to her individual goals. In this context, distance travelled can be linked to the measurement of 'soft outcomes' that are integral to the emotional intelligence component of the learning programme, for example the measurement of sense of well-being and of self-esteem.

As Table 1 shows, the key elements of the 'Theory of change' framework incorporate:

- **The initial issue/context:** what is the reason for setting up your project in your particular situation, and what other factors might affect the way you deliver your project, and its outcomes.
- **The rationale for the intervention:** what is your understanding of how this particular project – and the way it is being implemented, will bring about the changes you hope to achieve
- **Actions taken:** what exactly are you planning to do – including the nature of activities, materials used, etc. who you are hoping to reach (including numbers / time scales for this), what resources will be involved (staff, in your own organisation or others) where you will be delivering project activities, what, if any, other organisations will be involved in its delivery.
- **Short term outputs:** this is the tangible set of activities that you could call immediate results of the work – numbers of people reached (and their characteristics), what you did, different lesson plans, group activities, visits, how they were involved, perceptions of the success of the intervention in reaching participants, satisfaction measures, etc.

Table 1
Theory of Change logic map

A Initial issue/context	B Rationale	C Inputs and actions to be taken	D Short-term outputs	E Interim outcomes	F Long-term impacts
If…. What is the context/ situation locally?	Then… Why have you decided to take this particular action?	Then…. What do you plan to do and with what resources?	Then… What activities will take place, who will be involved	Then… What changes do you expect as a result?	Then… How will these contribute to your overall objectives

- **Interim outcomes:** this is concerned with the **assessment** of progress made by participants in terms of specific aims and outcomes.
- **Long term impacts:** the ultimate aims and objectives – what you are hoping to achieve – either for individual participants, your school or wider social aims (such as improving the quality of education services).

3. Theory of Change Adopted for IGUANA Schools

'Theory of Change' can be used for developing an Innovation Plan for the school. Its logic map enables us to do a number of things. With a logic map we can clearly specify the project's target users, what are their needs and how these can be addressed and to specify the activities that need to be done in order to address these needs. Equally the expected outcomes of the project are specified as well as activities that will deliver on these. It allows us to accurately assess how far the project is meeting these expected outcomes, and identify the assumptions that underlie these expectations, as well as to provide a systematic way of monitoring progress on outcomes. In Table 2 an over-arching Theory of change logic map adopted to IGUANA schools is presented.

Drawing a 'map' of espoused trajectory or strategy can greatly help to plan it and evaluate its progress. It is also useful to identify links by trying to answer questions such as: what is the rationale for your strategy and for the actions planned? How will the activities address the issues you identified? How will these activities contribute to meeting the ultimate impacts you hope to achieve? What kinds of results (outcomes) do you need to be on track for final impacts? How do these link together? What kinds of activities (outputs) would you need to achieve these results? How do these link together? How will you ascertain your expected outcomes and impacts? What corrective measures have

Table 2

Theory of Change logic map – IGUANA school

A Initial issue/ context	B Rationale	C Inputs and actions taken	D Short-term outputs	E Interim outcomes	F Long-term impacts
Traditional schooling methods are rigid, they limit individual thinking and hinder organisational change	OI scores in systems thinking and learning organisations and EI scores on adaptability are low and we need to work on these	Leaders to work with staff to encourage thinking more broadly, group work, peer re-view in school, seeking benchmarks, visiting establishments, welcoming performance appraisal; individuals to work on EI, etc.	Staff undertake work on EI modules for themselves; visits are made to other innovative establishments; experimentation in school encouraged, critical training on leadership, motivation and change management is deployed, etc.	Teachers and staff become more adaptable and able to share learning with each other across departments; students undertake more work in groups; collaboration becomes the norm in all key school activities, etc	Effective leadership practices and higher general motivation to engage in complex change ventures; enhanced shared vision; willingness to undertake LLL training activities; problem-solving through spontaneous CoP formation; increased creativity and entrepreneurship in students and also amongst teachers and other support staff, etc.

you in mind to remedy unmet outcomes? Have you secured proper contingency plans for unexpected changes in context or resource allocations?

The Innovation Plan will indicate the main development areas the school wishes to pursue, which EI or OI areas would be relevant to work on to support this and how to plan to do it, including metrics to monitor closely progress or regress on the expected acivities/outcomes.

However, there is often a need to have several impacts to achieve and create a more complicated map which shows how some outputs and outcomes link to different desired results. In any case, theory of change map development starts with the initial issues to be addressed – school 'context', and the EI and OI results which should suggest a direction to work on (the rationale). Next, decision on the expected results (impacts) – what the school wants to achieve with this IGUANA intervention must be made. Then, those working on it move backwards and through the other stages to complete the map.. One important thing to think about is that each stage is a 'prerequisite' for the next – i.e. without taking the actions it won't be possible to arrive at the outputs, and without these outputs the outcomes or impacts won't be achieved.

3.1. *OI and EI Results in Portugal and Lithuania*

In Tables 3 and 4 the normalised results produced by using the self-assessment tools in a Portuguese pilot school (a large secondary school located in the periphery of the Greater Lisbon conurbation) by seven respondents constituting the top leadership are presented. These results are normalised for two reasons[2]: (1) IGUANA self-assement tool's scoring systems are not uniform (*Systems orientation* and *Organisational well-being* have ranges from 7 to 35; *Learning Organisation* has a range from 8 to 40; the

Table 3

OI normalized results in Portugal schools

Respondent no.	Learning organisations	Groupishness	Normali- sation	Evaluation	Systems orientation	Organisational well-being	Holding environment
1	90,91	40,00	60,00	32,00	62,07	55,17	52,00
2	54,55	52,00	44,00	52,00	68,97	55,17	64,00
3	63,64	68,00	68,00	68,00	82,76	68,97	92,00
4	69,70	64,00	52,00	64,00	62,07	58,62	64,00
5	81,82	68,00	68,00	52,00	72,41	51,72	72,00
6	78,79	64,00	60,00	60,00	68,97	48,28	72,00
7	63,64	52,00	60,00	84,00	82,76	82,76	84,00
Ave.	71,86	58,29	58,86	58,86	71,43	60,10	71,43
Max.	90,91	68,00	68,00	84,00	82,76	82,76	92,00
Min.	54,55	40,00	44,00	32,00	62,07	48,28	52,00

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[2] It goes without saying that an equal normalisation was performed on the Lithuanian results – Table 5 and Table 6.

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Table 4

EI's normalized results in Portugal

Respondent no	Good enoughness	Emotional self-awareness	Self-confidence	Belief and assertiveness	Resilience	Initiative	Empathy	Relationship handling	Social responsibility	Anxiety management	Stress management	Optimism and happiness
1	78,05	86,49	68,29	82,93	73,17	87,80	73,17	65,85	73,17	85,37	70,73	82,93
2	68,29	70,27	68,29	68,29	60,98	60,98	68,29	58,54	58,54	70,73	70,73	70,73
3	75,61	81,08	70,73	63,41	70,73	65,85	65,85	75,61	70,73	75,61	68,29	73,17
4	60,98	75,68	60,98	53,66	73,17	63,41	73,17	73,17	90,24	70,73	68,29	65,85
5	63,41	78,38	65,85	60,98	85,37	70,73	75,61	58,54	70,73	70,73	65,85	82,93
6	63,41	83,78	58,54	53,66	58,54	53,66	78,05	80,49	68,29	53,66	56,10	80,49
7	73,17	62,16	63,41	80,49	75,61	82,93	60,98	85,37	82,93	92,68	75,61	80,49
Ave	68,99	76,83	65,16	66,20	71,08	69,34	70,73	71,08	73,52	74,22	67,94	76,66
Max	78,05	86,49	70,73	82,93	85,37	87,80	78,05	85,37	90,24	92,68	75,61	82,93
Min	60,98	62,16	58,54	53,66	58,54	53,66	60,98	58,54	58,54	53,66	56,10	65,85

rest have a range from 6 to 30); (2) the scoring systems have different polarities (for *Holding environment*, *Normalisation*, *Systems orientation*, *Evaluation*, high scores are 'positive'; for *Learning organisation*, *Organisational well-being* and *Groupishness*, high scores are 'negative').

The results of the OI testing shows that, overall, in the participating schools in Portugal, *Learning Organisation* – the school's capacity for critical review and reflection and how the school learns from critical reflection – is the most developed competence area (71.86%); likewise in *Systems orientation* – the open-ness of the school as a system and how it interacts with external systems – and *Holding environment* – which defines how leadership and authority roles are defined and how risk-taking and change is handled – are high ranking categories (71.43% both).The least developed OI competence element is *Groupishness* (58.29%) which assesses how work groups operate in unconscious mode and leadership and authority roles are implemented; likewise *Normalisation* – how the school imposes rule compliance; the school's capacity for 'marginal practices' and thinking outside the box – and *Evaluation* – how the school defines its vision; how this vision is implemented and assessed – occupy the lower ranking group of categories (58.86% equally).

The results of the EI testing in Portugal show that *Emotional Self-awareness* (76.83%) and *Optimism and Happiness* (76.66%) are the most developed emotional intelligence competences, and *Self-confidence* (65.13%) the least developed and the most in need of improvement. The results suggest that members of the participating schools are able accurately assessing awareness of one-self and awareness of one's relationship to the world around, easily understand that happiness is relative, they are able to identify factors that are associated with feelings of unhappiness as well as recognise that happiness is connected with understanding limitations. On the other hand, the participants have some difficulties in realising the benefits and shortcomings of self-confidence, apply-

ing it assertively in appropriate situations and enhancing the willingness to engage with people outside his/her usual group.

The OI test was performed in two Lithuanian schools using a collaborative group work implementation method. Each group consisted of four representatives of the school. The groups discussed each question and decided what the situation is in their school. The results (Table 5) show that, similar to the Portuguese results, the most developed competence area is *Learning Organisation* (81.82%) – the school's capacity for critical reflection and awareness on how organisational learning benefits from critical reflection. However the weakest area is *Normalisation* (52%) which is about how schools ensure their members comply with the school's vision, norms and rules. Thus, these two Lithuanian schools need help to create a climate of stability and order, and assistance in defining the boundaries – these being important attributes for a successful and innovative school.

The approach to EI was different of that followed in assessing OI levels. In this case, six Lithuanian respondents performed the self-assessment EI test without group interaction (Table 6). *Resilience* – coping with and adapting to challenges, *Social responsibil-*

Table 5

OI's normalized results in Lithuanian schools

Group no.	Learning organisations	Groupishness	Normali-sation	Evaluation	Systems orientation	Organisational well-being	Holding environment
1	78,79	48,00	76,00	64,00	86,21	68,97	64,00
2	84,85	92,00	28,00	88,00	68,97	79,31	88,00
Ave.	81,82	70,00	52,00	76,00	77,59	74,14	76,00
Max.	84,85	92,00	76,00	88,00	86,21	79,31	88,00
Min.	78,79	48,00	28,00	64,00	68,97	68,97	64,00

Table 6

EI's normalized results in Lithuania

Respondent no.	Good enoughness	Emotional self-awareness	Self-confidence	Belief and assertiveness	Resilience	Initiative	Empathy	Relationship handling	Social responsibility	Anxiety management	Stress management	Optimism and happiness
1	58,54	70,27	65,85	51,22	68,29	70,73	68,29	68,29	58,54	75,61	56,10	78,05
2	73,17	70,27	65,85	46,34	78,05	78,05	78,05	73,17	70,73	68,29	65,85	70,73
3	82,93	72,97	80,49	53,66	68,29	65,85	73,17	17,07	78,05	63,41	58,54	75,61
4	73,17	70,27	60,98	65,85	80,49	78,05	68,29	73,17	92,68	73,17	60,98	60,98
5	68,29	72,97	46,34	51,22	75,61	56,10	75,61	70,73	58,54	80,49	43,90	73,17
6	63,41	78,38	60,98	43,90	75,61	82,93	65,85	78,05	85,37	80,49	53,66	78,05
Ave	69,92	72,52	63,41	52,03	74,39	71,95	71,54	63,41	73,98	73,58	56,50	72,76
Max	82,93	78,38	80,49	65,85	80,49	82,93	78,05	78,05	92,68	80,49	65,85	78,05
Min	58,54	70,27	46,34	43,90	68,29	56,10	65,85	17,07	58,54	63,41	43,90	60,98

ity – awareness of ethical factors in relationships and decision-making; awareness of societal responsibility; awareness of working with diversity – and *Anxiety management* – recognition how anxiety arises; how it affects relationships and behaviours; how it can be managed – appear to be the most developed EI competences (74.39%; 73.98%; 73.58%, respectively). The competence area that appears to be most in need of improvement is *Belief and Assertiveness* (52.03%) which means the ability to take responsibility for behaviours and actions in a direct, honest and appropriate way, e.g. recognise that people should not take responsibility for the behaviour of others or for situations which are beyond their control.

Comparison of the OI scores across all the competence areas in the two countries is presented in Fig. 1.

Lithuania scores higher in all OI competence areas except one: *Normalisation* (with a 6.86% differential). The biggest difference can be observed in Evaluation (17.14%) followed by *Organisational Well-being* (14.04%) which explores (i) organisational cultures and preferred behavioural patterns in schools, (ii) willingness to change negative patterns and to enhance the more positive ones, and (iii) how effective are leadership and governance structures in enabling innovation and change. 11.71% is the difference between results in *Groupishness*, 9.96% in *Learning Organization,* 6.16% in *Systems orientation*. The narrowest difference in scores is in the *Holding Environment* area – 4.57%.

Fig. 2 presents a comparison of EI competency levels in Portugal and Lithuania.

The Portuguese schools average scores on the EI self-assessment tests are higher than Lithuanian in seven areas: *Belief and assertiveness* (14.17%), *Stress management* (11.44%), *Relationship handling* (7.67%), *Emotional self-awareness* (difference 4.31%), *Optimism and happiness* (3.89%), *Self-confidence* (1.74%), and finally *Anxiety Management* (0.64%). The higher differentials recorded in *Stress management* and *Relationship handling* show that Portuguese schools better recognise how stress arises, how it affects relationships and behaviours, and how it can be managed. Furthermore,
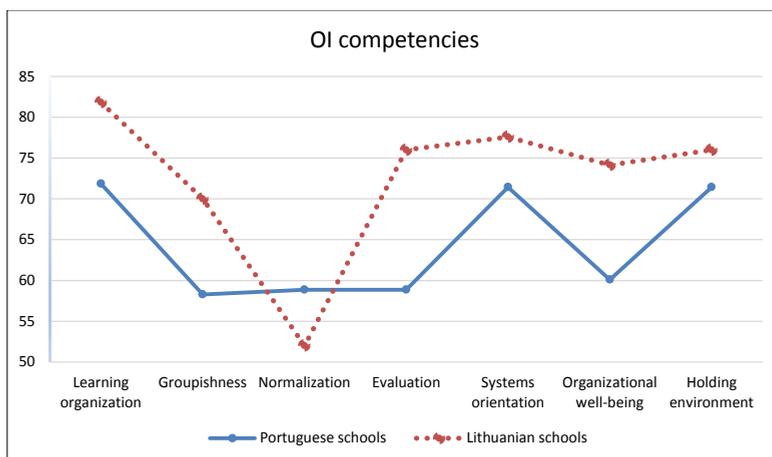

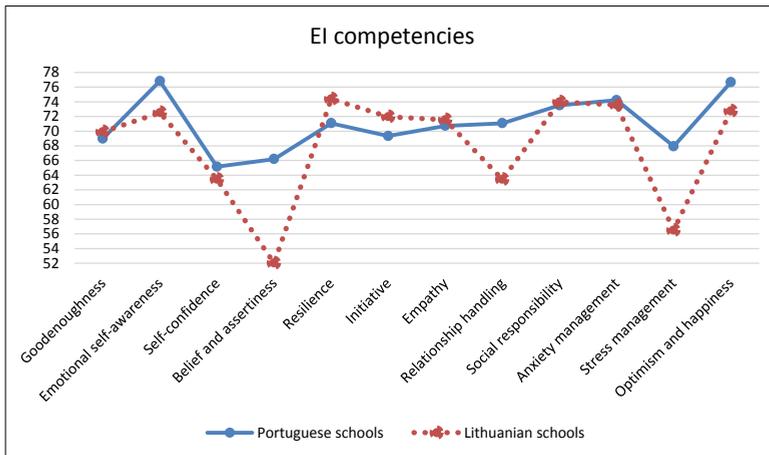Fig. 1. Comparison of OI competencies averages of Portuguese and Lithuanian schools.

Fig. 2. Comparison of Portuguese and Lithuanian EI competencies averages.

this distance in results provides hints at how the southern European schools display a better understanding than their counterpart northern schools on how to communicate effectively with others and support others in developing their potential to manage conflicts.

Lithuanian schools scored higher in the following competence areas: *Resilience* (3.31%), *Initiative* (2.61%), *Good-enoughness* (0.93%), *Empathy* (0.81%), *Social responsibility* (0.46%). However, the differences registered in these categories are negligible. These results suggest that Lithuanian school leaders slightly better understand how stuckness works and seem to be more prone to take a leadership role in resolving situations of stuckness.

In order to find out whether there is a significant statistical disparity between our Lithuanian and Portuguese results we used *the t* test for independent samples by comparing the means and standard deviations of both OI and EI competences between the two independent groups. The significance level is 0.05.

Stated research hypothesis that are put to test:

> *Null:* μLithuania = μPortugal. There is no difference of means in OI tests between Lithuanian schools governance and Portuguese schools governance.

> *Alternative:* μ Lithuania ≠ μ Portugal. There is at least one attribute with significant difference between Lithuanian schools governance and Portuguese schools governance as measured by the mean OI scores.

A similar hypothesis is utilised to appraise the statistical significance for the EI tests.

An independent Student's t-test was conducted to compare EI and OI results in Lithuania and Portugal schools. No significant differences were found in OI test results, but

there was a significant difference in means for EI results on the Belief and Assertiveness competence dimension between Lithuanian (M = 52.03, SD = 7.66) and Portuguese (M = 66.2, SD = 11.82) schools; t (11) = –2,512, p = 0.029. Because our p-value (0.029) is less than 0.05, we reject the null hypothesis and conclude that there is a significant difference between the countries. Similarly, there was a significant difference in means for the Stress Management competence dimension between Lithuanian (M = 56.5, SD = 7.47) and Portuguese (M = 67.94, SD = 6.04) schools; t (11) = –3,056, p = 0.011. Because our p-value (0.011) is less than 0.05, we reject the null hypothesis and conclude that there is a significant difference between the countries.

3.2. *Schools Innovation Plans*

The OI and EI self-assessment results provide a valuable foundation for schools to review where the school and its members are positioned with regard to their EI and OI competences. The results can be fed into a Change or Innovation Plan, which should specify which components of the IGUANA Learning Programme need to be prioritised. Another scenario is one in which the participating school has already developed a Change or Innovation Plan but progress is being held up by organisational resistance. In this case, the self-assessment results could be used as a catalyst for discussion about how to move forward. In any case, the recommendation is for self-assessment results to be reviewed as a collective and collaborative exercise involving all members of the school who are participating in the pilot. This can be done through an Action Learning Set (ALS).

Action Learning is an approach to develop people and organisations, which uses the 'task' as the vehicle for learning. It is based on the premise that there is no learning without action and no sober and deliberate action without learning. In IGUANA the Action Learning Set is a workshop that enables action learning to develop. It involves:

- A small group of people working initially with a facilitator, bringing practical issues and concerns arising from the IGUANA activities.
- Meeting regularly for an agreed period of time (we recommend four meetings over the period of the pilot).
- Sharing actual school/organisational issues, problems or opportunities arising from the IGUANA activities.
- Questioning and challenging learning from the IGUANA online programme.
- Making action points in order to bring about innovation and change in participating schools.
- Reporting back on progress to subsequent meetings and developing further plans.
- Obtaining feedback and evaluating progress.

Essentially, the ALS entails working with school stakeholders in a collaborative workshop mode, one that goes through the learning cycle shown in Fig. 3.

Sometimes, the classical ALS is modified to introduce an element of 'role playing', in which different stakeholder groups take on the point of view of other groups in order
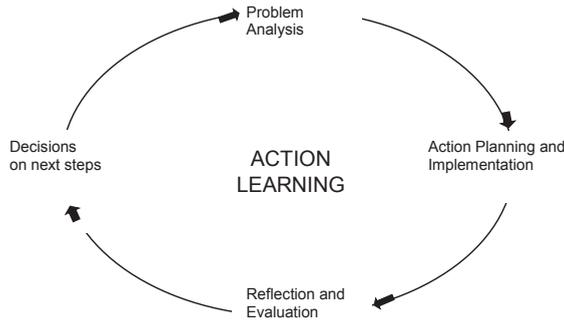
Fig. 3. The Action Learning cycle.

to explore a problem or reflect on an action that needs to be taken. This is because some groups – for example, students in schools – tend to have little or no voice in decision-making, and the role-playing element of the ALS enables this voice to at least be repre-sented in some form. In the ALS *modus operandi*, the group is sub-divided into usually three small sub-groups, each of which takes on the point of view (PoV) of its assigned group in order to carry out a common task.

Following the ALS, each school first developed its 'Theory of Change' map, and then used this map to develop an Innovation Plan.

Innovation Plans developed in Lithuanian schools are presented in Fig. 4 and Fig. 5. These Plans are based on the self-assessment results which were then used as the fun-damental contributor to the design of concrete Innovation Plans. In addition, the self-assessment results were reviewed as a collective and collaborative exercise involving all members of the school governance in Action Learning Set (ALS).

The first Lithuanian school Innovation plan aims to develop an open and creative learning environment. Self-assessment results showed that the EI competence (Belief and Assertiveness), one that equips individuals to manage themselves and their rela-tionships with others in response to changing situations, is at the lowest level. Fol-lowing harsh collective and collaborative discussions it was concluded that the main difficulties lie in taking responsibility for behaviours and actions in a direct, honest
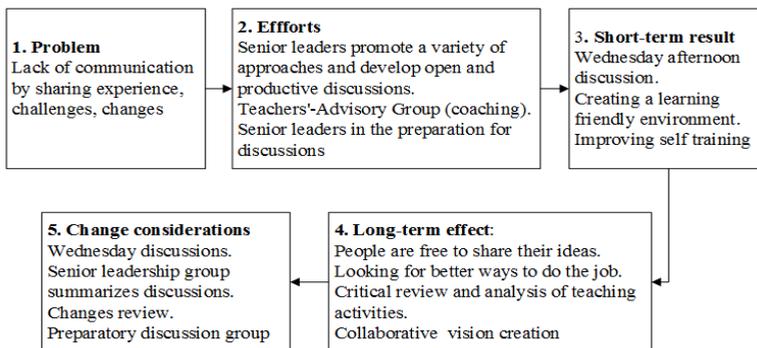

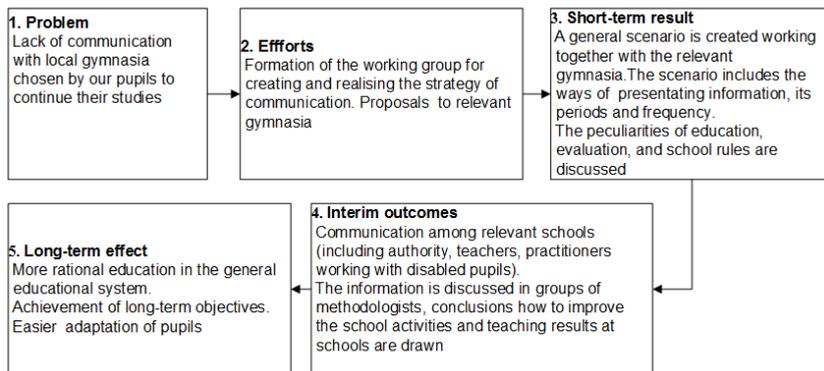Fig. 4. Innovation plan of Lithuanian school: Open and creative learning environment.

Fig. 5. Innovation plan of Lithuanian school: Systems Orientation.

and appropriate way. School members then further deliberated that the core issue was a lack of proper communication. Based on the Theory of change logic map the Innovation Plan was developed. Subsequently, a Wednesday discussions club was established. Here people can freely share ideas, critically review entrenched values and perceptions, collaboratively work in groups. People then started to communicate and act in accordance with suggestions provided in the IGUANA platform learning content repository mostly based on materials offered under the Belief and Assertiveness hat. School members were able to ascertain that the designed plan helped create a central school vision in an effective way.

The second Lithuanian school's Innovation Plan aims at developing an adaptive environment for pupils. The lowest level of competences was in the Normalisation area. This reflects how schools fail in ensuring their members comply with the school's vision, norms and rules. By doing this, schools could play an important role in how societies at large prepare citizens to abide by society's rules and norms. However, the school leaders decided firstly to improve the Systems Orientation area, which enables the openness of the school as a system and its interaction with external systems. After a collective and collaborative exercise it was concluded that the main problem is lack of communication with local gymnasiums which are chosen by their pupils to continue studies. School members decided to establish a working group for creating and realising the strategy of communication. They put forward proposals to relevant gymnasiums. Based on the Theory of Change logic map a plan was developed. School members developed the plan by using the IGUANA platform learning content repository with a focus on the Systems Orientation competence material. This information provided suggestions on how to become aware of obstacles both visible and invisible in place between different systems e.g. department to department, school to local authority, and how to find out more about how to work with and overcome them. School members observed that the plan encompassed tips to help understand how to improve school activities and teaching results at schools.

Systems Orientation means seeing what is happening in a group, a department, an organisation or even a community and understanding its relationship to the wider environment (also known as field). It means understanding that what we do, how we act and

behave, often has a lot to do with the surrounding factors and the nature of the intra and inter relationships between the organisation and environment.

4. Conclusions and Results

The IGUANA learning project aims to support schools that want to innovate but remain stuck in their inner forces resisting change. It also aims at assisting schools to improve their existing change programmes and develop new programmes. This approach helps schools establish their own open and creative environments in which students, staff and management feel safe and secure to share their ideas, learn from each other, and grow. The IGUANA project is delivered through a collaborative learning platform (`http://www.iguana-project.eu/assessment-tools`). The platform includes tools and learning materials that are designed to help schools and their members to develop Emotional Intelligence (EI) and Organisational Intelligence (OI) competences. Both the EI and OI self-assessment tools and learning contents combine animations, text and rating scales.

During the project period the theory of change was adopted in several schools and the logic map of this adaptation was developed. EI and OI tests were performed in few Portugal and Lithuanian schools. Results are overviewed and discussed, however, it is not possible to make deeper comparisons due to the small amount of participants. Some results can be used in order to create a Change or Innovation Plan of the learning institution.

Acknowledgements

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Emocinio ir organizacinio intelekto įsivertinimas mokyklose

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Pagrindinis projekto IGUANA tikslas – padėti mokykloms sukurti atvirą ir kūrybišką mokymosi aplinką, kurioje mokiniai, mokytojai, vadovai ir visi kiti mokyklos darbuotojai jaustųsi laisvi ir nevaržomi, dalindamiesi idėjomis, mokydamiesi vieni iš kitų, ir šitaip tobulėtų. Šiam tikslui buvo sukurtas emocinio bei organizacinio intelekto kompetencijų įsivertinimo įrankis, pateiktas IGUANA virtualioje mokymosi aplinkoje. Šio projekto kontekste emocinis intelektas apibrėžiamas kaip gebėjimas naudingiausiu būdu (sau ir kitiems) suprasti, reikšti ir valdyti mūsų pačių emocijas bei tinkamai reaguoti bendraujant su kitais žmonėmis, o organizacinis intelektas (inovacijų galimybė) – gebėjimas suprasti ir valdyti sudėtingas situacijas, kurti, dalintis ir naudotis žiniomis bei patirtimi. Straipsnyje pateikiami ir palyginami įsivertinimo testų, atliktų Lietuvos bei Portugalijos mokyklose, rezultatai, aptariama kiekvieno šių intelektų kompetencija, nurodoma, kaip naudotis aplinkoje esančiais objektais, koks ryšys tarp įsivertinimo įrankių, pateiktos teorijos ir užduočių. Taip pat pateikiami keli mokyklų kaitos planų pavyzdžiai, kurie buvo sudaryti ir sėkmingai įgyvendinti remiantis kaitos teorija.