Learning by having fun

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Abstract

Kykelikokos, a Saturday morning energy show for children, has been a great success in Norway. The combination of Energy Efficiency (EE) expertise and target group insight is an important success factor. The show uses a diversified message strategy to reach the various age segments on their own terms. The creators seek to increase the knowledge and awareness levels of future generations in regards to energy by presenting the topic in an interesting, informative and, above all, entertaining and fun way.

Research indicates that the use of humour, involvement and interactivity as important means of persuasion is truly effective – especially when targeted at children. Children learn about EE through entertaining features and participation in real-time activities. Feedback from children and parents indicates that the subject arouses interest and that children act as EE ambassadors in their own home. "Energy Efficiency" has through Kykelikokos become a word that is recognised as something positive and fun – which is unusual in the EE industry.

This paper includes an overview of the features of the TV show followed by a discussion based on the theoretical framework that supports the persuasive routes employed. Furthermore, the paper also describes the positive results of the programme and outlines various implications.

Others within the EE industry can use the experience and knowledge gained through Kykelikokos and the Energy Challenge to make humour, involvement and interactivity tools of their persuasion efforts targeted at children.

Introduction

A national survey executed by the MMI in Norway in November 1998 concluded that the concept of Energy Efficiency (that is the Norwegian word "enøk" meaning Energy Economising – in this paper the abbreviation EE will include both Energy Efficiency and Economising) showed a weak cognitive link with environmental issues related to energy use or general efficiency, but a rather strong link to electricity saving and money saving.

Polls by MMI, called the Norwegian Monitor, showed evidence that the general interest for EE was rather low in the population and that EE was not perceived as something important and necessary. In 1999, only 36% of the population thought that; "Make people use the energy in a more efficient manner" was a social issue or problem important to solve in Norway (MMI, Norsk Monitor 1999/2000). This can be explained by the fact that Norwegian energy production and supply has been dominated by cheap hydro power and traditionally been viewed as non pollutive energy and a national asset. Energy consumption increased in the 90s along with the need for import of less environmentally friendly energy. International agreements on CO_2 emissions and global focus on energy politics appeared on the national agenda. Hence, it became increasingly important to communicate the relationship between the term EE and environmental issues. Another assumption was that the general

population connected EE to a call for high investments in EE measures and a reprimanding mentality.

The idea to make Energy the main topic of a TV show was created from the idea that EE needed a new image – especially when presented to children. One believed that children as a target group for EE information, education and training would form attitudes at an early age and thus cause long-term results.

One also believed that this effort could give results in the short-term since children often are found to educate adults in their own household – being advocates of EE behaviour among the people they relate to in their daily lives. Under the motto; "children educate adults" the assumption that children make sure adults turn off the lights, close doors, use the off button in stead of putting electric equipment on stand-by etc. was used as an example that energy information and teaching of children can result in immediate energy savings as well.

Born from this, the Saturday morning environmental show – called Kykelikokos – became the Saturday morning energy show. The programme has created involvement and high ratings and it reaches a very important target group that will become tomorrow's energy users. The knowledge acquired through the show is assumed to create positive attitudes, and hence, the desired behaviours in relation to energy efficiency and environmental issues.

Scope

This paper describes a case study of a EE programme targeted at children. The paper discusses the possible results of the EE programme in the light of research on humour impact on behaviour, the relationship between attitude and behaviour and the importance of target group knowledge. The empiric material available has been used as a foundation for the inductive discussion and assumption that applied methods and techniques to reach the target group have been successful. The empiric material are; interactivity and direct contact with the children and active feedback from both children and their parents in the form of fan letters and participation in various EE competitions and thus the children's ability to solve EE tasks and answer EE questions correctly. A few random behavioural classroom and kindergarten observations have also been used to assess how the contents of the programme have reached the target group.

Preliminary evaluations paired with well-established theories have indicated that the project seems to be on the "right track", and that humour, interaction and engagement seem to be useful variables when explaining behaviour change. A more thorough scientific evaluation of the impact of the programme would be useful due to the vintage of the programme (over three years' duration) and that the project has been relatively costly. A recommended next step would thus be to undertake a scientific evaluation to confirm or reject the hypothesis that humour, interactivity and involvement leads to favourable behaviour change.

The discussion of suitable evaluation methods for assessments of EE results in the TV show genre and the targeting of this age group are in themselves interesting subjects, but fall outside the scope of this paper.

BACKGROUND

Planning of the Energy Efficiency project in Kykelikokos started in the spring of 1999. The initiative came from Norwegian Energy Efficiency Inc. and has since then been a co-operation project between the energy authorities represented by Enova SF, the production company Fabelaktiv, the Norwegian Broadcasting Company and Norwegian Energy Efficiency Inc (NEE). Enova SF funds the development and production of energy features in the programme. NEE provide the energy expertise and coordinates the project on behalf of Enova SF.

The project group and the creative editors in Kykelikokos work closely together. The tasks include the development of ideas and goal-oriented management. The project group also had responsibility for the quality assurance of the EE messages.

The paper will give a presentation of the programme features, including the way persuasive techniques have been implemented in the show in order to meet overall goals. In the next section, the conceptual framework based on behavioural theory that supports the persuasive routes employed in the programme will be discussed – more specifically, humour impact on behaviour, the relationship between attitude and behaviour and the importance of target group knowledge. The paper furthermore presents the results of the project, and finally, some conclusions and possible implications will be outlined.

Programme features

In this section, the paper will describe the goals of the project and the contents of the show. Extra focus is given to the Energy Challenge, since this feature has had most emphasis both regarding energy and EE message and received priority in the budget distribution.

THE OVERALL GOAL OF THE ENERGY EFFICIENCY IN KYKELIKOKOS

The overall goal of the Energy Efficiency in Kykelikokos is to contribute to the most efficient use of energy and increase knowledge about EE and environmental issues related to energy use in the main target group and the adults in their household through training and information.

The concept is designed to make Energy Efficiency an important term in children's consciousness and also to advocate a positive and natural attitude to rational use and distribution of energy.

FEATURES

The key words for the energy programme features have been humour and involvement; getting the viewers engaged by showing them tasks, engaging through competitions, getting them eager to know the right answers, detect smart or poor solutions, learn something new, cheer with the children that come through on the phone, desire to take an active interest in energy monitoring at home, find more information and games on the Kykelikokos home page and the Energy hunters' home page on the Internet, become a member of the Energy Hunters club, receive prizes and become an energy-smart kid.

The Kykelikokos show has for many years included interactive competitions – such as waste sorting competitions where children were to recycle waste paper, plastic and organic waste. The children, in turn, kept sure the adults in their household didn't fall into the trap of putting anything in the wrong wastebasket. By using this experience. The Electrical Studio and the first interactive energy competition on national TV were created.

The Electrical Studio

This competition engages children in front of the TV screens to save as many Watts as possible by "turning off" one of several electric appliances that are shown in the studio. It is the child, on direct line with the programme host, who makes the final decision on whether or not to turn off the electric heater, the waffle iron or the electric toothbrush. Always turning off the equipment that uses the most Watts at the moment gives the most points. The more Watts one saves the finer the prizes one receives.

The Energy Farm School

This low budget drama series is broadcasted throughout two seasons with 12 episodes each time. The first series dealt with all forms of energy – with focus on renewable energy sources. The second series dealt with behaviour related EE measures in households. The series focused on the possibility to try out things yourself with simple means. Try making wave energy in a washbasin – check out a waterfall in your kitchen sink – make a small water turbine in the forest brook near by. Make a toy windmill go round by bending over and fart … and so on and so forth.

The Ozone Man

The Ozone Man is a mini-series where the main character is a man with a mission: to save the environment and the ozone layer. He is a clumsy superman figure who sees no obstacles in the way of fulfilling his mission. He hunts down energy and environment politicians (for real), producers of products damaging to the environment and those responsible for unnecessary energy use affecting the environment.

The Energy Hunters

This high budget drama series is so far broadcasted throughout two seasons with 8-10 episodes each time. It is an exiting drama – balancing between humour and horror as the hunters work hard to track down the energy ghost that makes all people use more energy than they need.

The Energy Hunters Club is a club where all children between the ages of 3 and 12 can sign in as members and be real energy hunters themselves. The club has activities with prizes, and a membership card with a password for a club website on the Internet.

Reports and feature stories

There has been produced and broadcasted a great number of reports and feature stories, for example from the worlds largest wind turbines at Rørvik Wind Park, buses fuelled by biogas from waste, energy monitoring in school and other energy stories or energy sites around Norway. This is generally targeted at the oldest segment of our target group.

Figure 1. *Picture from the Electrical Studio.*

Figure 2. *Picture from the Energy Hunters. The Power-thief ghost that makes everybody use more energy than they need.*

Figure 3. *Picture from the Energy Hunters. One of the leading energy hunters fights the ghost with light power.*

Kykelikokos website on the Internet

One of the unique methods used to catch the children's interest is through linking the programme and its contents to information, games and activities on the Internet. During one show on Saturday morning, the show receives more than 500 e-mails, some of which the hosts read and answer, creating a even more interactive experience. The viewers can also participate in a different way by voting on the Kykelikokos homepage to air their favourite music video or to make the anchor do or say something. Sometimes the anchor

Figure 4. *Picture from the Energy Challenge 2001.*

presents a statement and the viewers will vote on whether it is true or false.

The Energy Challenge

This competition has been broadcasted on Norwegian national television (NRK) for two seasons. In autumn 2001 and autumn 2002 the program has been integrated in Kykelikokos, with ten episodes each season. This is a physical, intellectually demanding and environmentally conscious outdoor competition within the reality-TV genre.

The competition is organised as a tournament. The teams are divided into four groups of four team-members. The teams compete internally in the introduction rounds, and the two best teams from each group proceeds to the semi finale. From the semi final, the two best teams reach the final where one team is awarded the championship.

The tasks are all related to the main subject energy. The teams must perform something physical, put something together, find the solution to a problem, build something or answer questions related to energy. The tasks vary in degree of difficulty and are often challenging for the teams, in terms of knowledge, creativity and physical strength.

This is not, however, a reality television show with conflicts and intrigues, but on the contrary a show where children discover themselves (?) through games and outdoor experience.

All the tasks in the challenge deserve a thorough explanation. For example, the sailing task may show a passage about wind power, how the sailing vessels connected the world and how we transform wind energy into electrical power today. In the same manner, all the practical tasks may be developed and the content made more exciting with historical and applied references.

There are many basic thoughts embedded in the concept:

- To give the viewers a better understanding of energy and energy consumption, especially with the relation between consumption and environment. The energy consumption in the Western World today is perhaps the major environmental threat on the planet, and increased knowledge leads to reduced consumption.
- To pass on knowledge in an exciting and entertaining way for all ages with a focus on children.
- To show peculiar Norwegian nature and demonstrate that outdoor activities are both exciting and fun.
- To show that children are a resource. General comments on the series from adults are: – "I had no idea that children were able to do this!"
- To show team spirit and cooperation through tough challenge, joy and disappointment.

The Energy Challenge 2002 took place at Hovringen at the step of the mountain plateau Rondane, in the very heart of Norway. Even in fluctuating weather conditions, this location provides a variety of possibilities to present multiple sides of Norwegian nature, which can create the most unusual atmospheres: high mountains, wiry rivers, waterfalls, bewitching pine forests, dark mountain lakes, marshes, wide mountain plateaux and an open sky. This is close to the kingdom of the musk, and where herds of wild reindeer wander from north to south, a rich stock of game birds and the fish is on the feed.

Through the concept one wishes to mediate to the viewers an experience of nature in a way that nature deserves to be presented and preserved. The viewers will become engaged by the tasks in way that makes them eager to know the right answer, detect smart or poor solutions. He or she will learn something new about energy, cheer with "his or her" team, desire to take an active interest because the viewer wants to know if the team on third place can catch up with the team on second place.

The Energy Challenge entertains through spectacular tasks. It shows emotional scenes within responsible settings. It will show crucial choices, humour, sweat and joys, grief and comfort. The Energy Challenge will be moving, educational and entertaining and fun at the same time.

Conceptual framework

In this section, the paper will discuss the conceptual framework based on behavioural theory that supports the persuasive routes employed in the programme.In addition, a suitable application of the theory should present the links between the theories and practical decision and outcome. Two main theoretical arguments are used, borrowed from the fields of consumer behaviour, communication and persuasion: 1) Humour as a route to behaviour change, and 2) behaviour as a prediction of new behaviour, rather than the traditional attitude-behaviour paradigm.

HUMOUR – A SERIOUS A MATTER

The TV-show Kykelikokos has since the start in 1996 had a deliberate emphasis on the use of humour. One reason was the creators and producers eagerness to keep ratings high and thus the interest of the funding partners positive. There are, however, other reasons that through the years have been proven genuine. The creators wanted to be more than just another *cartoon maker* – jumping up and down making children laugh. Kykelikokos should be the "safe" children's

programme that should provide the target group with positive values and teach them our common responsibilities towards each other and the environment. The programme wanted to be a guidance to children in a mixed-up daily life. They wanted to express opinions and give practical advice on different matters. Another driving force was the idea that it would focus on the joy of life and the joy of living. Hence the term "the extendible environment" was used (and perhaps invented) to focus not only on the external environment, but also on the general surroundings and the interhuman relationships.

Humour can be defined as "the sudden awareness of an alternative construction of a distressful situation which dissipates (to some extent) that distress" (Boeree, 1998, p 2). Children's humour has been found to fit this definition well. Humour is assumed to be the discovery of safety within fear. Children, and especially older children, are fond of jokes made at the expense of adults. When a child reaches a certain age, the surroundings demand that the child live up to the standards of adults, and live by their rules. This is often frustrating and it is quite naturally creating some sort of stress (consciously or no), especially since the standards often represent something the child can not yet manage and therefore feels hard to live up to. Boeree (1998) holds that a central theme for children is assumed to be fear of unworthiness and inferiority. Thus, anything that relieves that fear in a sudden, perspective-changing way is found to be funny. Many of us will recognise that even the simple mistakes made by an adult, such as slipping on a word, forgetting or pronouncing a name wrong, stumble or trip, will for a while relieve the child's tension and be perceived as very humorous. Kykelikokos use this knowledge deliberately to be the children's own zone; free of pointed fingers and strict adult rules.

Humour impact on behaviour

Recent research supports the idea that humour influences the outcome of persuasive efforts, directly or indirectly. Moreover, there are two particular characteristics of communicators that play an important role in whether the message is accepted or not. The two are 1) Credibility and 2) Likeability (O'Keefe, 2002). O'Keefe holds that humour has the potential to influence likeability, which, in turn is a key determining factor for the successfulness of persuasion. He states; "only the conjunction of expertise (credibility) and trustworthiness (likeability) makes for reliable communication" (p. 183).

Liking as a persuasive route

O'Keefe (2002) holds that "one's general liking for a communicator is much more likely to influence one's judgements about the communicator's dispositional trustworthiness (the communicator's general honesty, fairness, open-mindedness, and the like) than it is to influence one's judgements about the communicator's expertise (experience, training, etc) on some particular topic or subject matter." (p. 190). He also claims that there is a causal relationship between humour and liking. When positive effects of humour are found, they tend to most directly "involve enhancement of the audience's liking for the communicator" (p. 190).

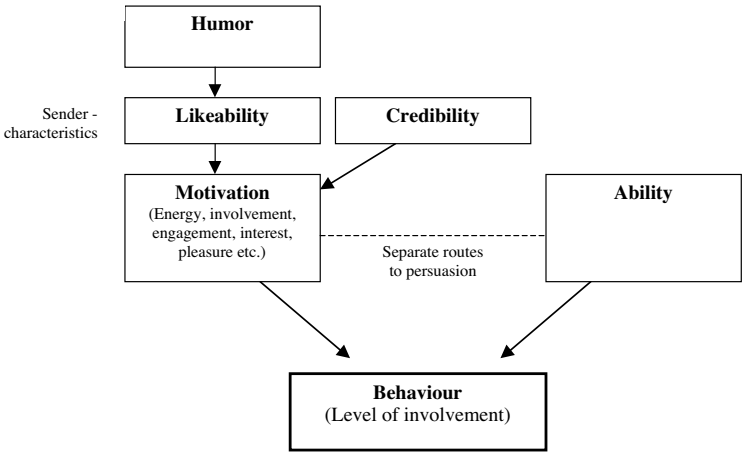

Figure 5.

To summarise, humour has little influence on whether the message is perceived as credible, but it influences likeability, which is often found to be equally important for positive persuasion effects. Humour is a pedagogical tool that can lead to liking of the communicator and through this pose involvement, release energy and in turn give the desired behaviour. A cause-effect-relationship overview is outlined in Figure 1.

This paper proposes targeting the persuasive goal from two separate angles, consistent with the TV-show.

1. The traditional route through increasing the children's knowledge about energy efficiency and environmental issues related to energy use – enabling the children to use the knowledge and make them *able* to behave in the desired manner (with a reference to "ability" in Figure 1).
2. Through liking and motivation as described above.

Most of the EE features in the show follow both routes. For example the EE Farm school was clearly about teaching children about different energy sources, including wave energy, wood, water power, nuclear power, sun energy, oil, gas etc. The presentation was, however conducted by a caricature of an eccentric farmer who was given a commission to teach Norwegian children about energy. As an assistant, the farmer was sent a slightly foolish student. The farmer's use of questions and challenges was used to engage the viewers to think for themselves and join in the problem solving. For example, the farmer and the student build various funny "power plants" to show the use of sun energy, small waterfalls and so on and so forth. Both characters are well-known hosts and popular characters and by that suitable to create liking and excitement among the children. The result was both educative and entertaining, making children sending fan mail and drawing pictures of scenes from the series, clearly showing that they understood the energy messages.

Humour and behaviour proneness through health

Humour causes desired effects beyond the assumption that humour will strengthen persuasive efforts through liking.

Figure 6. *Picture from the Energy Farm School. The student gets a lesson in wind power.*

Humour also has positive effects on a person's general health, which could be seen as an enabling factor. This argument must be seen as having less explanatory power towards a desired behaviour, but it might, as a parallel effect, contribute positively.

Some associations have build their business on the idea that humour can be used for medical purposes – and have both therapeutic and physical effects on the healing process of people who are ill.

For example, the business idea of Association for Applied and Therapeutic Humour argues that: "Therapeutic humour is defined to be: any intervention that promotes health and wellness by stimulating a playful discovery, expression or appreciation of the absurdity or incongruity of life's situations. This intervention may enhance work performance, support learning, improve health or be used as a complementary treatment of illness to facilitate healing or coping, whether physical, emotional, cognitive, social, or spiritual." (Association for Applied and Therapeutic Humour, 2002)

Research by done by William F. Fry, Jr., M.D., emeritus professor of clinical psychiatry at Stanford University, and Lee Berk and Stanley Tan of Loma Linda University, Calif., suggests that "mirthful laughter" does much more than we assume. It can provide exercise, reduce pain, reduce stress, stimulate the immune system and, most interesting in this contest, it can stimulate mental functions, such as alertness and memory, perhaps by raising levels of adrenaline and other chemical that prepare the body for action. One study recorded a wave of electricity sweeping through the entire brain half a second after the punch line of a joke.

The school system in Norway focuses significantly on motivational factors in the earliest years. Various kinds of games to learn math, riddles to learn the alphabet, and singing to learn all kind of subjects are introduced and turning the first years in school into something more like a goal oriented kindergarten.

This is now the rule – not the exception – and it is assumed to have a favourable effect on learning relative to traditional learning methods. In a teaching – student relationship and in the classroom in general humour or laughter have been viewed as "not working and therefore not learning". The work ethic inhibits the ability for educators to relax enough to even think about using humour as a tool to create a positive learning environment, according to Mary Kay Morrison (Education Update, 2001). Again, this refers to figure 1 as the humour-liking-motivation dimension relative to the "ability"-route to persuasion (and learning).

The mission in the project has been to teach through a television programme and therefore to overcome those types of prejudices and obstacles.

The children (viewers) will experience the programme as entertainment and fun as their main outcome and the knowledge will be a (perhaps unconscious) spin-off effect. In the long run it is assumed that the engagement, liking and interactivity will be contributing factors to a long-term attitude change.

THE ATTITUDE AND BEHAVIOUR RELATIONSHIP

The traditional and earliest paradigm within the field of consumer behaviour, marketing and communications have been grounded on the assumption that attitude predicts behaviour. In other words, you make up an opinion about a subject and act accordingly. This frames human beings as rational. It is no surprise that this thesis has shown to have a poor explanatory power in numerous cases, although theories based on this causality of events still are widely employed. Interestingly, despite all criticism, this assumption is still quite wide spread.

Resent textbooks in marketing and PR education still teach about attitude formation and change. Most discussions of both attitude development and change stress the traditional view that that consumers causally develop attitudes before they act. This view is still held to be relevant and valid if the receiver of information is highly involved with the potential purchase or subject matter. Schiffman and Kanuk (2001) present the traditional "Think before you act Model" or the "Active Learning Model" by stating that when the product or subject matter is of high importance the this route to behavioural change is still valid; "Since the decisions in this category are especially important, it is not surprising that the model portrays consumer as progressing through a three-stage hierarchy – from awareness and knowledge to the formation of attitudes, and then to behavior." (p. 310).

Later, research showed a quite different view of the causality, suggesting an anti-thesis proposing the total opposite; human beings were not at all rational - in fact, attitudes were loosely formed, and adopted according to whatever suited the situation. This is called the Attribution theory and the underlying question is always why; "why did I do this?" or "why did he/she/they do that?" Attribution theory portrays attitude formation and change as an outcome of people's understanding and interpretation of their own or others behaviour and experiences.

There are many perspectives on Attribution theory. One that can be seen in the EE context is the "Foot-in-the- door-technique". Situations where people comply with small or simple requests (e.g. habits regarding EE, like turning off lights) affect subsequent attempts to gain their compliance with a more substantial request (e.g. insulate walls or invest

in temperature control equipment). Schiffman and Kanuk (2001) explain that the technique is based on the premise that "individuals look at their prior behavior (compliance with minor request) and come to the conclusion that they are the kind of person who says yes to such requests – If effective, such self attribution serves to increase the likelihood that they will say yes to the more substantial request" (p. 307).

In the latest decades, a synthesis has formed, suggesting that both paradigms have explanatory power. In some situations, attitude predicts behaviour, yet in other situations, behaviour can be predicted by an initial behaviour. The last effect is well described in Cognitive Dissonance Theory and can provide understanding of how the methods applied in Kykelikokos have had desirable effects.

Cognitive dissonance

Cognitive Dissonance Theory is grounded by the assumption that cognitive inconsistencies (that is, inconsistencies between ideas, attitudes, beliefs and even actions) are taken to be an uncomfortable state, and therefore, persons are seeking to reduce this gap or avoid this. Cognitive Dissonance Theory, originally introduced by Leon Festinger (1957), suggests that cognitions (or cognitive elements) can have three types of relationships: irrelevant, consonant or dissonant. A dissonant relationship means that a person has two cognitions that are in conflict: You favour energy efficiency, but still you leave windows open, lights on, etc.

There are two broad means of reducing dissonance. The first way is to reduce dissonance by changing the relevant proportions of consonant and dissonant elements. This can be done in several ways; you can add supporting cognitions in one way or the other (e.g. assure yourself that lighting produces so much heat that turning them off would not be profitable), or change or delete existing dissonant cognition (e.g. assure yourself that lighting is insignificant for the total consumption of energy). Yet another way to reduce dissonance is altering the importance of the issue or element involved (O'Keefe, 2002) (e.g. it is more important to reduce energy for heating than for lighting. Hence, energy use for lighting is not that important for EE or the environment).

How may this support the pedagogical messages and techniques employed in Kykelikokos? One external example can provide this insight:

You were looking for a new car as a replacement of your Ford, the fifth Ford in a row. You like all the Ford attributes (cognition). In fact, you almost consider yourself a Ford-person. The Ford dealer also sells Toyotas, and somewhat sceptical, you try this new Toyota. This person is also quite charismatic, and the flashy red colour provokes a quick buying decision. Now you have an unpleasant dissonance between your behaviour (you bought and now owe a Toyota) while still having favourable attitudes (cognitions) towards the Ford attributes. This dissonance state may be solved either by selling the car or by changing your attitudes. In more cases than not, the attitude change is the most convenient route (you seek as much positive information about Toyota as you can get, finding as much good reasons for your action as possible). In conclusion, the behaviour predicts attitude with dissonance as a driving force. This principle applies also to the way Energy Challenge is constructed.

Figure 7. Picture from the float race in the Energy Challenge 2002.

The Energy Challenge is a good example of how behaviour impacts attitude. The competition is about taking action and getting involved. It is therefore behaviour first – attitudes are formed as a result of first having found right answers and solved problems. The viewers will become engaged by the tasks in by making them eager to know the right answers before the contestants and detect smart or poor solutions before they do. The viewers will learn something new, cheer with "his or her" team, a desire to take an active interest because he or she wants to know if the team on third place can catch up with the team on second place.

Through the Energy Challenge, one wish to entertain through spectacular tasks, to show emotional scenes within responsible reason, show fatal choices, humour, sweat and joys, grief and comfort. Engagement comes first – education and attitudes is a successive effect.

TARGET GROUP KNOWLEDGE

An important success indicator is target group knowledge. Knowing your audience is always important in communication, and when the audience can turn the programme off or leave the room, this knowledge is essential. One has to know who watches and what catches their interest in a better way than the competitor's. Important questions will for instance be; do the same children watch the whole programme, do girls and boys watch different features or does the same age group watch different parts of the programme?

The Kykelikokos programme lasts for 2 hours and 15 minutes. More than one hour of this period is broadcast live. The rest of the duration is filled with drama series, feature stories, reports and cartoons. Surveys show that the youngest children follow the program from the start at 08.00 hours. They tend to loose interest after 1 to 1 1/2 hours whereas the oldest segment of the target group (6-12) increases in number of viewers throughout the show. Typically the oldest children (9-12) follow the last half hour of the show. This knowledge is used deliberately when deciding what kind of features to show at what time of the programme. Cartoons, children's pictures and reports from kindergarten are shown in the first hour and the more demanding feature towards

Figure 8. *Picture from the Energy Challenge 2002. The winning team builds a water turbine in a brook.*

the end of the programme. Thus, the Energy Challenge is broadcast in the last half hour of the programme.

Knowledge about other EE programmes targeted at children, the school curriculum on this subject and general pedagogical skills is also important to make interesting and engaging features.

Results

The Kykelikokos show has, in spite of increasing competition, had a stable market share. When broadcasting the Energy Challenge in the autumn 2002, the show had a market share of 64% – a new record for the programme. In the beginning of a new year the show now settles at an average market share of 55%, and attracts a growing number of adult viewers – a total of 260 000 viewers and 185 000 in the primary target group (3-11).

The following indicators can illustrate the success of the show:

- The Kykelikokos web sites register 6,5 million hits every month and the programme receives 2 500 emails and letters every week, many stories of children being EE advocates in their own home.
- On the most Kykelikokos has registered 110 000 callers for the interactive game shows on one Saturday morning. More than 50% of the callers have The Electrical Studio as their first choice.
- The Energy Hunters Club has since the start in 1999 enrolled 12 000 registered members and achieved the goal of 2 000 members during 2002.
- Since opening the new website for members of the Energy Hunters, the site has had approximately 10 500 hits every month.
- Approximately 5 500 have played the Energy Challenge game on the Internet during 3 months.
- Every week the show is broadcasted, approximately 5 000 visit the Kykelikokos' website on the Internet. This website includes a EE website with games, links and EE information on the club, etc.
- In every show energy puzzles, games, solar cell caps and other energy related prizes are sent to fortunate children all over Norway.

The motto has remained the same from the start: "We believe that the children that learn to turn off the light when leaving the loo today, will ask for energy efficient solutions when they build their houses in 20 years".

The message is presented in a way that catches the target group's interest – using humour, involvement and interactivity as efficient tools to reach goals of persuasion. The unique link between TV and Internet activities has contributed in engaging children throughout the week – not only during the two hours show. Through Enova's other programme areas targeting children, the message has been given focus in many channels and from many angles. If you however ask a child in a Norwegian kindergarten today: "What is Energy Efficiency?" – the chance that the answer somehow contains the word "Kykelikokos" is staggering high.

The childrens' increased ability to solve EE tasks in the Energy Challenge and the rising amount of correct answers submitted at the web site and written competition as well as in the interactive competition "The Electrical Studio" have given us indications that children learn from the EE presented in the show.

Feedback from children and parents indicates that the subject catches interest and that children act as EE ambassadors in their own home. "Energy Efficiency" has through Kykelikokos become a word that is recognised as something positive and fun – witch must be seen as unusual in the EE industry. Through activities and competitions, the children learn about energy use and that there are several energy choices in their daily lives. And maybe most importantly, they have a good understanding of the cost of energy – both in terms of money and environmental costs.

Conclusions

TV is a powerful medium when targeting children. TV creates engagement through opinion leaders, idols and through all of the means and methods mentioned in this paper.

To make a successful EE programme, one has to coordinate energy knowledge, target group knowledge and presentation and communication expertise related to the TV media as well as pedagogical skills. Having the idealistic goals to make a positive impact on children's lives, and at the same time keep them engaged and entertained is a key success element.

We believe that Kykelikokos has contributed positively by giving EE a new image among tomorrow's energy users.

Implications

The EE in Kykelikokos project group will continue its work to make EE important and interesting for children.

The Energy Challenge was nominated the best children's show both in Norway and at the European Prix Jeunesse.

The Prix Jeunesse Foundation was established to contribute to improve worldwide television for the youngsters, to deepen understanding, to promote communication between nations and to increase the international program exchange. For this purpose, a festival is held bi-annually at Bayerischer Rundfunk in Munich. Participating in Prix Jeunesse is the children's television's most engaging and rewarding professional training exercise.

Our next objective is to take the latest success, the Energy Challenge, and turn it into a stand-alone concept. We will increase the number of tasks, remain focus on humour and learning, and engage both participants and viewers.

Other EE organisations and implementers of EE programmes targeted at children can use the experience and knowledge gained through Kykelikokos and the Energy Challenge to develop programme concepts that utilize humour, involvement and interactivity to persuade the audience to manage their energy resources in an efficient way and to grow up to become future citizens of a sustainable society.

The paper has discussed preliminary conclusions based on experience working with the programme, TV-ratings, data from competitions (on TV) and strong indications of interest for the subject matter. Furthermore, the paper employs well-established theories to describe and explain the consequences of the preliminary findings. The applied theories also suggest a causal relationship between relevant variables, which helps understand what causes behavioural change in this target group.

A recommended next step would thus be to undertake a scientific evaluation to confirm or reject the hypothesis that humour, interactivity and involvement leads to favourable behaviour change.

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