

TWELVE TIPS

Twelve tips to stimulate intrinsic motivation in students through autonomy-supportive classroom teaching derived from Self-Determination Theory

R. A. KUSURKAR^{1,2}, G. CROISSET² & OLLE Th. J. TEN CATE¹

¹UMC Utrecht, The Netherlands, ²VU University Medical Center, The Netherlands

Abstract

Background: Self-Determination Theory (SDT) of motivations distinguishes between intrinsic and extrinsic motivations. Intrinsic motivation is observed when one engages in an activity out of genuine interest and is truly self-determined. Intrinsic motivation is the desired type of motivation for study as it is associated with deep learning, better performance and positive well-being in comparison to extrinsic motivation. It is dependent on the fulfilment of three basic psychological needs described by SDT. These are the needs for autonomy, competence and relatedness. According to SDT, autonomy-supportive teaching is important, because it makes students feel autonomous and competent in their learning and also supported (relatedness) by their teachers.

Aim: The concept of autonomy-supportive teaching is relevant to medical education, but less known. Through this article, we aim to make this concept understood and practically used by medical teachers.

Methods: We used SDT literature as a basis to formulate these 12 tips.

Results: We present 12 practical tips derived from SDT, for teachers in health professions, on how to engage in autonomy-supportive teaching behaviours in order to stimulate intrinsic motivation in their students.

Conclusion: These tips demonstrate that it is not difficult to engage in autonomy-supportive teaching behaviour. It can be learned through practice and self-reflection on teaching practices.

Introduction

Medical educators have tried to determine to what extent medical students are intrinsically or extrinsically motivated (Williams et al. 1994, 1997; Mann 1999; Misch 2002; Sobral 2004; Kusurkar et al. submitted). This discussion aligns with Self-Determination Theory (SDT) of motivation which distinguishes between intrinsic and extrinsic types of motivations (Deci & Ryan 2000; Ryan & Deci 2000a). Intrinsic motivation is observed when one engages in an activity out of genuine interest and is truly self-determined. Extrinsic motivation is observed when one engages in an activity for a particular benefit or because of pressure from others (Ryan & Deci 2000a, b). Intrinsic motivation is considered the desired type of motivation in students (Ryan & Deci 2000a, b) and it has been shown to be associated with deep learning, better performance and well-being (Deci & Ryan 2000; Ryan & Deci 2000a, b) in comparison to extrinsic motivation. Moreover, intrinsic or extrinsic motivation is not a permanent or personality characteristic of an individual. Extrinsic motivation for a task can change to intrinsic motivation and vice versa (Deci 1975).

For this change, the right elements need to be present in the learning environment (Ten Cate et al. in press).

Intrinsic motivation is dependent on the fulfilment of three basic psychological needs described by SDT (Deci & Ryan 2000; Ryan & Deci 2000a, b). These are the needs for autonomy, competence and relatedness. The need for autonomy is the need to feel that one is carrying out a task of his own choice. It is not forced or coerced in any way. The need for competence in learning is the need to feel capable of learning the study or course material. The need for relatedness is the need to feel a connectedness or a sense of belonging with fellow pupils and the teachers (Deci & Ryan 2000; Ryan & Deci 2000a, b). A recent qualitative study in The Netherlands found that non-fulfilment of the needs for autonomy, feedback and emotional support leads to dropout or consideration of stopping training among graduate doctors who are in training (Van der Linden 2011). We find the results of this research in alignment with SDT. Autonomy-supportive teaching proposes to satisfy these needs in order to stimulate intrinsic or self-determined motivation among students (Williams & Deci 1999; Reeve et al. 2004; Patrick & Williams 2009) as opposed to

Correspondence: R. Kusurkar, Center for Research and Development of Education, University Medical Center Utrecht, PO Box 85500, 3508 GA Utrecht, The Netherlands. Tel: +31 88 7556819; fax: +31 88 7553409; email: R.Kusurkar@umcutrecht.nl

controlling teaching behaviour. Probably, the most correct term to describe this concept would be self-determination supportive teaching, but autonomy-supportive teaching has been used in SDT literature.

Autonomy-supportive teaching is important because it makes students feel autonomous and competent in their learning and also supported by their teachers, fostering relatedness. In medical education, autonomy in learning (White 2007) and autonomy-support by teachers in medical education has been found to make students' motivation more self-determined (Black & Deci 2000) and also make the students more autonomy-supportive towards patients and in their health practice (Williams et al. 1994, 1997; Williams & Deci 1999). The concept of autonomy-supportive teaching is relevant to medical education, but is relatively less known (Ten Cate et al. in press). We present here 12 practical tips, derived from SDT, for teachers in health professions, on how to engage in autonomy-supportive teaching behaviours in order to enhance intrinsic motivation among their students. For more in-depth information on types of motivation and applications of SDT in medical education, we would like to refer our readers to AMEE guide 59 on SDT (Ten Cate et al. in press).

Tip 1

Identify and nurture what students need and want

Make an attempt to understand what students want out of the teaching sessions and structure the format of teaching around these needs. This is to make the learning more relevant, intriguing and interesting, thus stimulating among the students a genuine interest in the subject, hence intrinsic motivation. For example, a teacher, who finds out from course evaluation that the students are interested in learning glucose metabolism as seen in a patient rather than in theory, could choose to construct a case-based learning session on glucose metabolism cycle and highlight steps where there could be risk of complications and where medical interventions would be justified. This is a scenario where the content taught remains constant, but the format of teaching is in congruence with the students' needs.

Tip 2

Have students' internal states guide their behaviour

Structuring the lesson around the needs of the students helps to create a state of self-determined motivation (internal state) among these students. Allow this autonomous motivation state to further guide the study behaviour of the students instead of trying to provide incentives like telling students that 'this topic is important for the exam' or providing them rewards or withholding rewards. Students, who are genuinely interested in learning about the topic, invest time and effort in reading more about the subject, come prepared to the class and are more attentive. Thus their behaviour, both in and out of class, reflects their interest in the subject. Having their own 'internal state' guide their study behaviour, rather than use incentives to

guide their behaviour, is a highly effective stimulus for persistent interest and efforts in the study.

Tip 3

Encourage active participation

Encourage active participation from the students during the class. This makes learning more autonomous, makes it easy to provide feedback during discussion of ideas and increases feelings of relatedness among the students and with the teacher. Dividing the students into two groups, giving each group the responsibility for discussing and summarizing part of the topic is one way of ensuring active participation. This approach stimulates discussion among the students and every student is actively involved in the learning process. A seating arrangement, an important element of this process, which facilitates the interaction of the students with each other and the teacher, is recommended.

Tip 4

Encourage students to accept more responsibility for their learning

Encourage students to accept more responsibility for their learning. Having responsibility for their own learning has been shown to stimulate students' motivation (Willis et al. 2002). Ways of encouraging students to accept more responsibility for their learning are ending the session with further questions to be discussed in the next sessions and allotting some 'nice to know' topics for self-study. Only giving students more responsibility for their learning is not enough though the teachers need to communicate these expectations to the students clearly and early in the course. Active participation of students in learning sessions transfers some of the responsibility for learning from the teacher to the students making the learning more autonomous.

Tip 5

Provide structured guidance

Provide structured guidance to the students during the teaching sessions. Transferring responsibility for learning to the students does not mean that the teacher is only in the background leaving students to do everything themselves. It rather means that the teacher is providing structure to the session, gently urging the students along the right path and taking a more active and definitive role if the session starts going completely in the wrong direction. This calls for a delicate balance between letting the students take the lead and bringing in own expertise in the subject matter whenever required. It has been seen in research that combining highly autonomy-supportive and highly structured teaching sessions bring about the best learning outcomes (Reeve et al. 2004).

Tip 6

Provide optimal challenges

Provide optimal challenges during the teaching session, e.g. give the students small topics for preparation and presentation in groups. This not only helps the students feel autonomous and competent in their learning but also helps them to practice other softer skills (e.g. presenting to an informed audience) which are of value to them in the long run. Students should not be forced to take part in these activities, but participate out of their own volition. It would also mean giving students, who are not well-prepared for such challenges, more time to gather their courage and mentally prepare for them. Thus the challenges need to be optimal (Atkinson 1966; Vermunt & Verloop 1999), neither too difficult nor too easy, the idea being to make the students feel competent in their learning. Feelings of competence greatly enhance intrinsic motivation (Ryan & Deci 2000b).

Tip 7

Give positive and constructive feedback

Give timely, positive and constructive feedback to the students on the process of learning, to show the gap between the current and the desired understanding, rather than the task of learning (i.e. grades) (Hattie & Timperley 2007). The manner of giving feedback should be non-threatening, directed towards learning issues and not towards the person, phrased in a positive way and giving tips for improvement in the future. Pendleton's rules (Pendleton et al. 1984) (first, the students says what went well, followed by what the teacher thinks went well; then the student talks about what could be improved and how, followed by what the teacher thinks could be improved and how) for giving feedback provide useful guidelines for training oneself to give feedback to others in an effective manner. Giving positive feedback does not mean that corrective feedback for errors made should not be given. It rather means that this feedback should be phrased as 'points for improvement', thus isolating it from any negative connotations. The tone of the feedback is equally important. Points for improvements should be presented as 'suggestions' and not as 'directives' (Reeve et al. 2004).

Tip 8

Give emotional support

Create an environment of emotional support for the students. Emotional support entails creating a warm, positive and sharing atmosphere in the classroom where students feel safe to express their feelings, doubts and questions. Having positive interaction with the teacher is likely to make students more interested in the subject matter. This feeling of 'relatedness' with the teacher supports the enhancement of intrinsic motivation of the students (Ryan & Deci 2000b). It creates a community feeling and students may feel more committed to the study of medicine because they now have the feeling of

belonging to a 'medical community' which includes not only their teachers, but their fellow students as well.

Tip 9

Acknowledge students' expressions of negative effect

Listen patiently to the students and empathize with them if students express their disinterest or dissatisfaction with a particular topic or a particular method of teaching. If the teacher refuses to accept negative feelings from the students, the students are likely to lose all interest in the further teaching sessions. Students need to feel heard, think that their feelings are important to the teacher and that they can influence some things in the teaching sessions with their constructive feedback. For example, the students might be generally interested in the topic being taught, but may be disinterested on a particular day because of an impending exam. If they communicate this to the teacher, the teacher should empathize with them, try to look at the situation from the point of view of the students and maybe even recount his own experiences as a student. Even the feeling of the teacher being approachable because of 'relatedness' might be enough for the students to try to make an attempt to concentrate on the teaching on a particularly tough day. It is important to not be judgemental when students communicate their feelings.

Tip 10

Communicate value in uninteresting activities

It is unlikely that all activities or teaching sessions are interesting for every student. Students who are not motivated can have a negative effect on the motivation of other students in the group (De Grave et al. 2002) and even on the motivation of the teacher. Hence, it becomes important to think about how to handle these students or how to motivate these students to engage in the expected behaviours. To make the expected behaviour of these students self-determined, a teacher could communicate the value of doing these uninteresting activities to the students (Ten Cate et al. in press). This means providing rationales for engaging in the requested behaviours. For example, for students who are not interested in Biochemistry as a subject or particularly in glucose metabolism, the teacher could explain how it is relevant and important in medical practice, how many patients with diabetes they could expect to encounter in their lives and what would happen if this diagnosis is missed. The teacher could also ask students whether they have any family members suffering from diabetes and thus make the topic relevant to all the students. If the students understand the value of studying this subject for their medical career, they will autonomously choose to study it, thus shifting their motivation towards the self-determined motivation, rather than it being controlled by the teacher's expectations. Accepting certain behaviours because one values them results in more permanent learning due to a more self-determined motivation.

Tip 11

Give choices

Give choices to the students whenever possible in order to bring in autonomy. These choices could include what could be the sequence of topics in a particular course, could there be a short evaluation after the course, what could be the way to do it, would the students like to do presentations on the topic, who would volunteer to present, etc. Being involved in some of the planning helps the students feel closely related to the course and enhances their intrinsic motivation to do the things required for the course due to their feelings of being stakeholders in the teaching–learning activities.

Tip 12

Direct with ‘can, may, could’ instead of ‘must, need, should’

Use the right words while guiding students in their work. While addressing the students, the words typically used by controlling teachers are ‘you *must* learn this’, ‘you *should* do this’, ‘this is *obligatory*’, ‘if you want to succeed, you *need* to learn this’, ‘if you study this, I will *reward* you’, ‘if you don’t do this, I will give you a *bad* grade’, etc. Autonomy-supportive teaching behaviour would entail the use of words like: ‘you can learn this’, ‘maybe you could do it in this way’, ‘it is *your choice*’, ‘if you want to know this topic well, it *would help* to include this in your study’, ‘if you study this, it will increase your understanding of related conditions’, ‘if you don’t study this, you *may lose out on understanding* some topics in the future sessions’, etc. Phrasing comments and suggestions in the right way, i.e. which is not binding on the students, but gives them the chance to decide for themselves (hence autonomous), is very effective in enhancing their intrinsic motivation.

Conclusion

Autonomy-supportive teaching is beneficial to enhance students’ intrinsic motivation for medical study. The 12 tips mentioned in our article demonstrate that it is not too difficult to engage in autonomy-supportive teaching behaviour. It can be learned through practice and self-reflection on teaching practices. Having autonomously motivated and interested students in teaching sessions may well enhance teachers’ intrinsic motivation for teaching through feelings of competence and relatedness.

These 12 tips can be applied in different types of teaching sessions like large groups, interactive lectures, clinical presentations, etc., and also in problem-based learning sessions. In problem-based learning sessions where the teacher is not a content-expert, some of the tips would be applied at the level of the course coordinator.

Finally, it is ironic that to adhere to the style of the ‘Twelve tips’ series, we had to word our tips as directives instead of suggestions or choices for enhancing the intrinsic motivation of teachers to incorporate these tips into their teaching styles.

But readers must be aware that we would merely like to encourage their self-determination.

Acknowledgements

The authors would like to thank a few teachers from the UMC Utrecht, namely Evelien de Moel, MD, Carolina JPW Keijsers, MD, Thomas E. Fick, MD, and Louis M A Akkermans, PhD, for their suggestions on an earlier version of this manuscript. R. A. Kusurkar came up with the idea of writing this article and discussed it with G. Croiset and Olle Th. J. Ten Cate to finalize the perspective. R. A. Kusurkar made a first draft after the suggestions and ideas from G. Croiset and Olle Th. J. Ten Cate. G. Croiset and Olle Th. J. Ten Cate gave their critical comments and R. A. Kusurkar made revisions as per the suggestions. All authors contributed to the important intellectual content, structuring of this manuscript and approved the final version of this manuscript for submission.

Declaration of interest: The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this article.

Funding: None

Notes on contributors

R. A. KUSURKAR, MD, is a Researcher in the Center for Research and Development of Education, UMC Utrecht.

G. CROISET, MD, PhD, is a Professor of Medical Education and Director of the Medical Studies Programme, VUMC, Amsterdam.

OLLE Th. J. TEN CATE, PhD, is a Professor of Medical Education and Director of the Center for Research and Development of Education, UMC Utrecht.

References

- Atkinson JW. 1966. Motivational determinants of risk-taking behaviour. In: Atkinson JW, Feather NT, editors. *A theory of achievement motivation*. New York: John Wiley & Sons. pp 11–29.
- Black AE, Deci EL. 2000. The effects of instructors’ autonomy support and students’ autonomous motivation on learning organic chemistry: A self-determination theory perspective. *Science Educ* 84:740–756.
- De Grave WS, Dolmans DHJM, Van Der Vleuten CPM. 2002. Student perspectives on critical incidents in the tutorial group. *Adv Health Sci Educ Theory Pract* 7:201–209.
- Deci EL. 1975. *Intrinsic motivation*. New York: Plenum Press.
- Deci EL, Ryan RM. 2000. The “What” and “Why” of Goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry* 11(4):227–268.
- Hattie J, Timperley H. 2007. The power of feedback. *Rev Educ Res* 77:81–112.
- Kusurkar R, Croiset G, Ten Cate OTJ. (submitted). Motivational profiles of medical students: Association with study effort, academic performance and exhaustion.
- Mann KV. 1999. Motivation in medical education: How theory can inform our practice? *Acad Med* 74:237–239.
- Misch DA. 2002. Andragogy and medical education: Are medical students internally motivated to learn? *Adv Health Sci Educ Theory Pract* 7:153–160.
- Parton H, Williams GC. 2009. Self-determination in medical education: Encouraging medical educators to be more like blues artists and poets. *Theory Res Educ* 7(2):184–193.

- Pendleton D, Scofield T, Tate P, Havelock P. 1984. *The consultation: An approach to learning and teaching*. Oxford: Oxford University Press.
- Reeve J, Deci EL, Ryan RM. 2004. Self-Determination Theory: A dialectical framework for understanding sociocultural influences on student motivation. In: McInerney DM, van Etten S, editors. *Big theories revisited*. USA: Information Age Publishing Inc. pp 31–60.
- Ryan RM, Deci EL. 2000a. Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemp Educ Psychol* 25:54–67.
- Ryan RM, Deci EL. 2000b. Self-determination theory and facilitation of intrinsic motivation, social development and well-being. *Am Psychol* 55(1):68–78.
- Sobral DT. 2004. What kind of motivation drives medical students learning quests? *Med Educ* 38:950–957.
- Ten Cate OTJ, Kusurkar R, Williams GC. 2011. How self-determination theory can assist our understanding of the teaching and learning processes in medical education. *AMEE Guide no. 59. Med Teach* 33(12):961–973.
- Van der Linden E. 2011. Why do the doctors in training drop out. (In Dutch), *Medisch Contact* 66(18):1121–1124.
- Vermunt JD, Verloop N. 1999. Congruence and friction between learning and teaching. *Learn Instruct* 9:257–280.
- White CB. 2007. Smoothing out transitions: How pedagogy influences medical students' achievement of self-regulated learning goals? *Adv Health Sci Educ* 12:279–297.
- Williams GC, Deci EL. 1999. The importance of supporting autonomy in medical education. *Ann Intern Med* 129:303–308.
- Williams GC, Saizow R, Ross L, Deci EL. 1997. Motivation underlying career choice for internal medicine and surgery. *Soc Sci Med* 45(11):1705–1713.
- Williams GC, Wiener MW, Markakis KM, Reeve J, Deci EL. 1994. Medical students' motivation for internal medicine. *J Gen Intern Med* 9:327–333.
- Willis SC, Jones A, Bundy C, Burdett K, Whitehouse CR, O'Neill PA. 2002. Small-group work and assessment in a PBL curriculum: A qualitative and quantitative evaluation of student perceptions of the process of working in small groups and its assessment. *Med Teach* 24(5):495–501.